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Practical Pharmacy Edition

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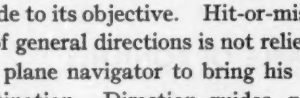
Editorial

ON THE BEAM

OF NO small importance to modern air transportation are the so-called direction finders and other instruments designed to keep the plane headed straight for its goal . . . "on the beam" . . . that serves as the guide to its objective. Hit-or-miss reckoning of general directions is not relied upon by the plane navigator to bring his ship to its destination. Direction guides, properly functioning and properly followed, mean safety. If they function incorrectly or are not properly observed, the usual result is disaster.

To the pharmacist, a carefully charted course to a definite objective and a well-developed program to keep him "on the beam" toward his goal are essential.



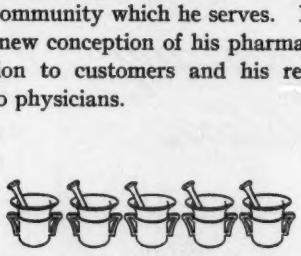
What should this objective be?

It is up to the individual, of course, and depends upon his training, his ability, and his conception of pharmacy, but the only successful, satisfying objective for the pharmacist can be to render a necessary service to the physician, dentist, nurse, veterinarian, and other health groups, and to the public; to be a real factor in the prevention and treatment of disease in his community. How great his financial remuneration will be depends upon how great is his contribution.

With this or a similar objective clearly in mind, he should chart his course. He should say to himself, "This is what I hope to accomplish and these are the things I must do to achieve that goal. To these basic principles are related a great many details which will come to me in ideas and suggestions that I must weave into my program, but I must remember that they are isolated factors which can benefit me only as they become a part of my general plan. I must never let any of them assume undue importance in my mind and swerve me from my long-range objective."

A visible prescription department, a professional window display, or a detailing visit to a physician in themselves are but contributing factors to the success of a comprehensive professional program. Alone and incoördinated they mean nothing and can be expected to accomplish even less.

To be successful, a pharmacist must *believe* in pharmacy. He must be convinced of the public need for his services. Once he is convinced of this he should go one step further by analyzing his position and function in the community which he serves. He will gain a new conception of his pharmacy, his obligation to customers and his responsibility to physicians.



It will make a big difference.

When Mrs. Brown brings in a prescription for someone in her family who is in bed with a cold he will suggest the purchase of a box of cleansing tissues to aid in making the patient comfortable, to avoid the necessity

for laundering a large number of handkerchiefs and to prevent the spread of the infection to other members of the family. His suggestion will be motivated not by the extra nineteen-cent sale he may make but by a real sense of serving the patient.

When Mrs. Smith tells him of the persistent head colds of her husband and he suspects an allergic condition, he will explain how medical science to-day is able to ferret out the guilty substance in many such cases and he will recommend consulting a physician.

When a customer asks his opinion of the respective worth of two products he will give his honest opinion, based on an actual knowledge of the merits of the two products and not on whether he makes a few cents more profit on one than the other. He would sell out his pharmacy before he would sell out the confidence of his customers.

He will detail physicians, not on his prescription services alone, but on his general facilities and ability to aid in the *comfort* of patients as well. He will tell doctors about new items in his stock of sick-room supplies . . . a new type of invalid cushion, a new measuring spoon for medicines, a new spring attachment for hypodermic syringes to make it easier for the uninitiated to give himself injections, etc. The physician will thus be promptly informed of such items and will suggest that his patients obtain them. Anything that makes the patient more comfortable complements the treatment of disease.

Pharmacy can be profitable and there are thousands of successful stores all over the country that testify to the fact that a man can be a good pharmacist, follow the teachings of his college professors, observe the ethics of the profession and keep faith with himself *in a practical way* and be financially successful.

No one but the individual himself can decide upon the objective and conceive or plan the program he needs. There *is* a place, however, for some agency to bring him ideas and suggestions of practical, usable nature that he can weave into his program . . . to keep him up-to-date with new developments in compounding methods, in pharmaceutical research, in medical techniques, in legislation and to show him how other pharmacists are meeting problems which are similar to those he is facing. He could do this himself if he had the time to study all of the leading medical, dental, hospital, and general scientific journals each month; to analyze voluminous governmental reports; to talk with officials of the various governmental agencies which have some jurisdiction over the practice of pharmacy; and to visit the leading pharmacies from coast-to-coast to pick up ideas that he could use in his store.

But no man living can do all that and practice pharmacy too, so there is a place in the field for some agency to do it for him. It is this place that the AMERICAN PHARMACEUTICAL ASSOCIATION hopes to fill with this Practical Pharmacy Edition of its JOURNAL at this, the beginning of its second year.

We have taken as our objective the publication of the most practical, usable, professional journal available to the pharmacist to-day. We have drafted a program which we believe should guide us to that goal. We shall endeavor to practice what we preach and stay "on the beam."

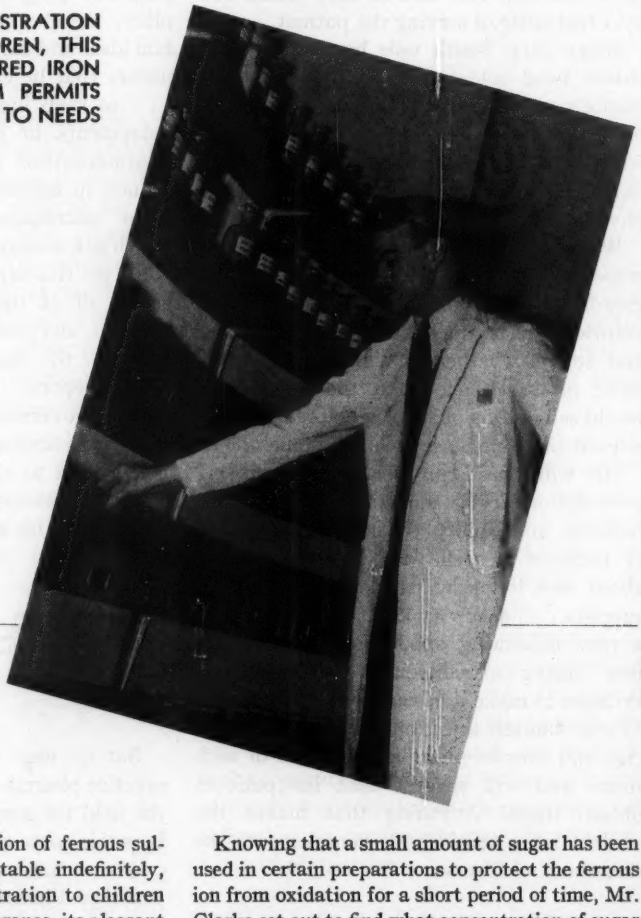
This is your journal. Your suggestions, comments, and criticisms will help us pattern it to your needs and will be most welcome.

A STABLE SYRUP OF FERROUS SULFATE

Developed by DONALD A. CLARKE

APOTHECARY-IN-CHIEF, THE NEW YORK HOSPITAL

DEVELOPED FOR ADMINISTRATION TO INFANTS AND CHILDREN, THIS NEW PEPPERMINT-FLAVORED IRON TONIC IN LIQUID FORM PERMITS ADJUSTMENT OF DOSAGE TO NEEDS



Donald A. Clarke in the pharmacy of the New York Hospital where he developed this product for the use of pediatricians.

"GIVE us a liquid preparation of ferrous sulfate that will remain stable indefinitely, and will lend itself to administration to children by virtue of its attractive appearance, its pleasant taste, and by making it possible to vary the dosage to fit different ages," said the Formulary Committee of The New York Hospital to Donald A. Clarke, chief of that hospital's Pharmacy Department, several months ago.

So Mr. Clarke went to work.

Iron is not easy to maintain in the ferrous state, particularly in solution. Exposure to light and the frequent exposure to air when the container is opened favor the oxidation of the ferrous ion to ferric and the precipitation of ferric hydroxide.

Knowing that a small amount of sugar has been used in certain preparations to protect the ferrous ion from oxidation for a short period of time, Mr. Clarke set out to find what concentration of sugar would be necessary to protect a given quantity of ferrous sulfate indefinitely.

The physicians wanted a preparation that would represent 0.1 Gm. of ferrous sulfate per teaspoonful (4 cc.) and U. S. P. ferrous sulfate contains a minimum of 54.36 percent $FeSO_4$ per 100 cc. so he saw that if he wanted 2.5 Gm. of $FeSO_4$ he would have to use $.5436:1::2.5:x$ or 4.6 Gm. of the U. S. P. salt.

His experiments showed that a saturated solution of sugar in water (85%) would effectively prevent this amount of ferrous sulfate from oxida-

tion. A slight precipitation of ferrous hydroxide at the end of three or four weeks was found to be due to the presence of a small amount of ferric ion in the ferrous salt from which the preparation was made, but this precipitation could be controlled by increasing the acidity of the product by the addition of 0.2 percent of citric acid.

Spirit of peppermint was used as a flavoring agent because it is a favorite flavor among children and completely masks the disagreeable ferrous taste. In Mr. Clarke's case, physicians at the hospital had been thinking of the preparation in terms of an "elixir of ferrous sulfate" and for his purpose the alcohol in the spirit of peppermint made the product at least theoretically hydroalcoholic and, thus, fit the designation "elixir." The title "Syrup of Ferrous Sulfate," however, would more accurately describe it.

The complete formula for the preparation, as developed by Mr. Clarke, is as follows:

Ferrous Sulfate, U. S. P. XI.....4.6 Gm.
Citric Acid.....0.2 Gm.
Spirit of Peppermint.....0.2 cc.
Simple Syrup, U. S. P. XI, *q. s.*...100.0 cc.

Weigh out citric acid and grind into powder in a suitable mortar. Add to this the required amount of granular ferrous sulfate but do not triturate. Add to this a small quantity of simple syrup (enough to cover well) and triturate vigorously until the ferrous sulfate granules are reduced to as fine a state of sub-division as possible. Have a suitable bottle ready and pour into bottle. Wash out the mortar with divided portions of the syrup and add to above. Then add the Spirit of Peppermint and add sufficient syrup to make 100 cc. Cork bottle well and shake vigorously from time to time. When all the salt is dissolved, strain through several thicknesses of gauze The preparation is then ready for dispensing. Note: Avoid any metal utensils contacting this preparation. In preparing large quantities slow motor agitation is desirable. Use as freshly prepared ferrous sulfate as possible for the older the salt is the more ferric ion it contains. When made with an old salt the preparation acquires a light green color which does not increase in intensity after prolonged exposure to light but does disappear on exposure to actinic light and then reappears upon removal from such light.

The preparation has been used in the Department of Pediatrics of The New York Hospital and has proved effective.

DETAIL THIS PRODUCT

Here is a product which you can prepare to meet a real need of the physician, particularly the pediatrician. Iron deficiency anemias or hypochromic anemias, as they are known, develop frequently in pregnancy due to the demands of the infant on the mother and unless an adequate metabolism of iron is established in the mother prenatally, the child may be born with an iron deficiency and in addition, leave the mother anemic. Furthermore, the growth of infants and children carries with it an increase in blood volume requiring an adequate supply of iron. Here are the points to emphasize:

1. Modern medical opinion believes that anemias due to iron deficiencies respond best to

Be sure to triturate the ferrous sulfate under simple syrup to prevent oxidation.

treatment with inorganic salts, preferably in the ferrous state.

2. Children will take a pleasantly-flavored liquid preparation more readily than they will take a pill or tablet.

3. A liquid preparation permits a wide range of dosage to satisfy the needs of every patient from new-born infant to adult.

4. The preparation is permanently stable and retains its original appearance indefinitely.

5. This preparation has been used clinically in the Department of Pediatrics of the New York Hospital and has been found effective, giving an adequate blood hemoglobin response in three to four weeks.

BODY REQUIREMENTS

Physicians prescribe such preparations on the basis of the ferrous iron content per dose and a consideration of the amount which must be administered per day to the patient in order to raise the hemoglobin content of the blood rapidly and economically. Pediatricians at The New York Hospital believe that an adult requires about 500 mg. of ferrous iron per day and that infants and children require from 78 mg. to 104 mg. per day. Each 4 cc. of this preparation represents approximately 37 mg. of ferrous iron.

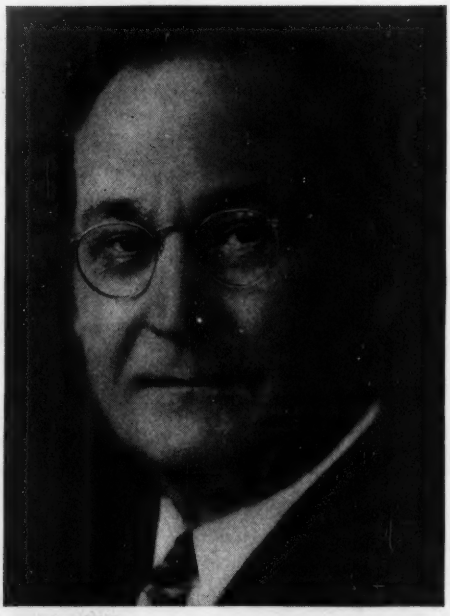
PRESIDENT-ELECT OF A. Ph. A.

Bernard Victor Christensen, Dean of the College of Pharmacy of Ohio State University, Columbus, will take office as president of the AMERICAN PHARMACEUTICAL ASSOCIATION at the closing session of the Detroit convention next August. He was elected by the mail ballot of members of the ASSOCIATION last fall and will serve for the year 1941–1942.

Dr. Christensen was born in Westfield, Wis., and obtained his early education in the Rural Schools of Marquette County and the Westfield High School. He enrolled in the elementary course of the Stevens Point Normal School and upon graduation he taught in the Rural Schools of Marquette County for one year, served as Principal of the State Graded School in Modena, Wis., for two years, and then re-entered Stevens Point Normal School in the full course. Upon graduation he successively served as Principal of the High Schools of Prentice, Friendship and Baldwin. He continued his studies during summers at the University of Minnesota and the University of Wisconsin while he was serving as high school principal. During the year 1916–1917 he completed requirements for the Bachelor's degree at the University of Wisconsin. After again serving in the public schools of Wisconsin as Superintendent at Arcadia and Augusta for a period of six years, he returned to the University of Wisconsin to continue with the study of pharmacy.

He received the degrees of Ph.B., M.S., and Ph.D. from the University of Wisconsin and served as instructor in Pharmacy at that institution during the latter three years of his study. In 1927 he accepted appointment as Head Professor of Pharmacognosy and Pharmacology of the College of Pharmacy, University of Florida, in 1933 he was made Director of the school and in 1939 he accepted the post of Dean of the College of Pharmacy of Ohio State University.

Dr. Christensen is the author of many books and papers on the cultivation, collection, preservation, and assay of medicinal plants. He received the Ebert Prize in 1939 for a group of papers on gelsemium, veratrum viride, and ergot. He is a member of the U. S. P. Revision Committee, Fellow of the American Association for the Advancement of Science, member of the Committee on Botany and Pharmacognosy of the National Research Council and a member of five fraternities and many scientific societies. He is a registered pharmacist in Wisconsin.



DR. B. V. CHRISTENSEN

THE STATUS OF STILBESTROL

SYNTHETIC ESTROGEN, NOW IN USE IN ENGLAND, AWAITING APPROVAL AS A "NEW DRUG."

CALLED by one clinician "the most valuable addition to our therapy in recent years," the first synthetic estrogen, *diethylstilbestrol*—or *stilbestrol* as it has been named for the sake of convenience, awaits only the approval of the Federal Food and Drug Administration as a "new drug" before being placed on the market as an inexpensive, orally-administered therapeutic agent for the relief of the menopause and other conditions.

Although in use for a considerable length of time in England, the introduction of the new substance in this country has been delayed pending a thorough investigation of conflicting reports of untoward reactions accompanying its use. As soon as the present controversy over these side-actions is settled, stilbestrol will take its place in the armamentarium of physicians and on the prescription room shelves of pharmacists.

Stilbestrol will be welcomed because it will extend the treatment of one of the most distressing of natural body processes: the emotional stress, irritability, mental depression, exhaustion, and physical upsets that accompany "change of life" in women between the ages of 40 and 50 years when ovarian function decreases. This synthetic substance will decrease the cost of effective treatment and make it available to more women, and, being effective orally, it will eliminate the necessity of hypodermic administration which is distasteful to many persons.

SYNTHESIZED IN 1938

The synthesis of stilbestrol was announced in 1938 by four English investigators who described it as 4:4-dihydroxy-alpha:beta-diethyl stilbene. The effectiveness of this substance when administered orally first attracted attention because the natural estrogens lose as much as 95 percent of their activity when given by mouth whereas stilbestrol suffers relatively little loss of activity when administered perorally.

Some investigators feel that the detoxification of the natural estrogens in the liver is a safeguard that is absent in the case of stilbestrol. This, however, has not been conclusively demonstrated to the satisfaction of all investigators.

The untoward reactions of stilbestrol administration include nausea, abdominal distress, anorexia, diarrhea, headaches, dizziness, and thirst. Some investigators report an extremely high percentage of these side reactions, while others report a complete absence or a not-excessive number and characterize the reactions as "disagreeable but not harmful" and believe that they can be minimized by reducing the dosage.

Stilbestrol possesses all of the important effects of the natural estrogenic hormones; namely, promotion of uterine growth, stimulation of vaginal mucosa, growth of breasts, inhibition of lactation, endometrial proliferation with subsequent withdrawal bleeding, and inhibition of the activity of the anterior pituitary gonadotropic and growth hormones.

A tremendous amount of research has been done on this new drug. A recent bibliography lists more than 160 papers which have been published on the subject and many more have appeared since the bibliography was compiled. The controversy concerning the safety of the preparation remains, however, and its future probably depends upon whether clinicians can conclusively prove that the reactions are unpleasant but innocuous. Numerous pharmaceutical manufacturers are interested in the research and the commercial introduction the drug awaits the results of further investigation.

Stilbestrol is a drug which will bear watching for if and when it is released for general use it undoubtedly will be in great demand. In the meantime, pharmacists should be familiar with its status in order to answer the questions of physicians intelligently.

THE PHARMACIST AND THE DRAFT

by H. EVERT KENDIG
CHAIRMAN
COMMITTEE ON THE STATUS OF PHARMACISTS IN GOVERNMENT SERVICE

DEFERMENT, PLACEMENT IN PHARMACEUTICAL WORK, AS WELL AS THE POSSIBILITIES FOR COMMISSIONS DEPEND UPON THE INDIVIDUAL INVOLVED.

MUCH confusion still exists in the minds of pharmacists concerning their status with respect to conscription under the Selective Training and Service Act of 1940 and many conflicting reports and rumors dealing with the situation are being heard and read. It is well to take stock of our present knowledge and attempt to clarify the thinking of pharmacists in as authoritative a manner as possible.

To give a direct reply to the questions which we are being asked daily by telephone, by mail, and by wire, the following catechism has been prepared. It represents the best information at our command at the present writing.

Are pharmacists automatically deferred from training and service because they are members of a profession that is "necessary to the maintenance of health?"

No. There is no blanket deferment for any group, class, or profession. Deferment is based upon *individual* conditions. Although the profession of pharmacy is certainly "necessary to the maintenance of health, safety, and interest," deferment of an individual pharmacist by a local draft board depends upon whether or not he is a necessary man in the particular community whose removal would represent such a material loss that the pharmaceutical services available in the general neighborhood would be inadequate as a result. It would have to be proved that he could not be replaced satisfactorily because of a shortage of persons with his qualifications or skill.

Are proprietors of "one-man stores" classed as necessary men and deferred?

Not necessarily. If such a man could not be replaced or if his removal would cause a material loss in the pharmaceutical services available in the community he might be deferred by his local draft board but merely the fact that he conducts a "one-man" store does not assure deferment.

Will a pharmacist who is drafted be placed in a position where he will perform pharmaceutical duties?

He may, and he may not. The Army will do its best to place draftees, after they have had the required military training, in departments of the service where they will perform duties for which they are best equipped by civilian training and experience.

What will decide whether or not a pharmacist will be placed in a position where he will do pharmaceutical work?

The decision will be based on (1) the need of the Army at that time for pharmaceutically trained men, and (2) the qualifications of the individual draftee. Bear in mind that there are pharmacists within the draft age limit who have had two, three, and four years of college training and who, thus, have different qualifications.

Every pharmacist, in completing his records when inducted, should set out specifically his training and experience as a pharmacist and request to be assigned to the Medical Department for service as a pharmacist.

What rank does the pharmacist receive if he is placed in a position where he performs pharmaceutical duties?

Such men will be given the rating of technical sergeant with pay of $84.00 a month and sustenance, after they have received their basic training.

Are pharmacists eligible for commission in the Medical Administrative Corps?

Yes, if they have the proper qualifications of education, ability, character, are capable of assuming leadership, and meet the other requirements of "officer material." It is presumed that only those who have had four years of college study will be considered eligible from the educational viewpoint and not all of these will be able to meet the other requirements of an Army officer.

It is contemplated that a block of commissions in the Medical Administrative Corps Reserve will be set aside for suitably qualified pharmacists for duties particularly in large station and general hospitals. Instructions to this effect will shortly be issued to the Corps Area Headquarters.

How does a pharmacist apply for a commission in the Medical Administrative Corps Reserve?

Those educationally and otherwise qualified and already in the service as draftees should apply to their military commander.

Those not in the service should apply to their Corps Area Headquarters for commissions in the Medical Administrative Corps Reserve. If commissioned they may be called for duty at once or may be left on the inactive list until a later date.

What is "Red Cross Enrollment"?

Early last year the American Red Cross invited pharmacists to enroll voluntarily with its organization as "pharmacy technicians." Those who enrolled were investigated and to date, 775 have been accepted. This enrollment was carried on at the request of the Surgeon General of the Army and he has asked military authorties to classify for duty in the Medical Department all Red Cross enrollees who are drafted for a year of military service.

Each enrollee has an identification card which he presents at the time he is conscripted. This enrollment will facilitate his being assigned to pharmaceutical duties as promptly as possible.

Is enrollment in the Red Cross still open?

Yes. Applicants should write to the American Red Cross, Washington, D. C., for the necessary forms to enroll as pharmacy technicians.

May I repeat, in conclusion, that the entire program of Selective Training and Service is built on a consideration of the individual circumstances concerning each draftee. No group, class, or profession receives blanket consideration. Pharmacists, as a class, are not exempt, or deferred. Pharmacists, as a class, are not assured of commissions. Pharmacists, as a class, are not even assured that they will be placed in positions where they will perform pharmaceutical duties. It is the individual, his civilian circumstances, and both his educational and general qualifications, as well as the Army requirements which must be considered.

Wide World Photos

Every pharmacist, when inducted, should set forth his training and experience and request to be assigned to the Medical Department for service as a pharmacist.

A product may give temporary relief from certain symptoms of a simple cold but it must not be labeled as a competent treatment for a cold, says the Food and Drug Administration.

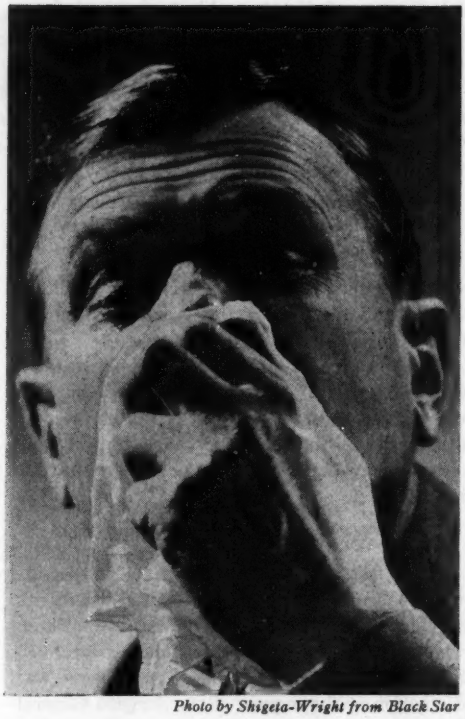


Photo by Shigeta-Wright from Black Star

F. D. A. TO ACT ON LABEL CLAIMS OF "COLD" PRODUCTS

NO KNOWN SUBSTANCE WILL PREVENT OR CURE A COLD, STATES W. G. CAMPBELL IN ANNOUNCING NEWEST DRIVE.

"PRESENT-DAY medical opinion supports the view that there is no known substance or mixture of substances which can be relied upon to prevent or cure colds," W. G. Campbell, Commissioner of Food and Drugs of the Federal Security Administration, notified manufacturers of "cold" preparations on February 3.

"Surveys of products which now appear upon the market show that many of them make claims involving the treatment or prevention of colds which are not justified by the scientific facts; others exaggerate the effects which the medication will have upon the symptoms," said Mr. Campbell.

"It is the opinion of this Administration that any reference to colds in the labeling of a drug should clearly indicate just what the effects of the medicine with respect to this disease condition will be and, if necessary avoid misunderstanding, just what the limitations of the medication are," he said.

GUARANTY IMPORTANT

Mr. Campbell's announcement suggests two actions on the part of the pharmacist:

1. He should make sure he has an adequate guaranty from the manufacturer or wholesaler covering every "cold" preparation he stocks. Such a guaranty relieves him of the responsibility for statements made in the labeling. The pharmacist should make sure that each such guaranty meets the requirements set forth in the regulations issued under the Food, Drug, and Cosmetic law.

2. If he puts up any "cold" preparations of his own he should make sure that their names

are not subject to criticism. Such names as *Cold Breakers, Cold Stop, Cold Remedy, Cold Treatment, Cold Relief, Sure Stop For Colds, Cough Remedy, etc.*, or any other title that might suggest that the product is an effective cold treatment or preventive are believed to be unsatisfactory. He should also make sure that the labels contain no unjustified statements as to the effectiveness of the preparations. During the past year the Federal Trade Commission took exception to such statements concerning "cold" remedies as the following:

A cure for colds
A remedy for colds
Will stop colds
Will prevent the development of colds
An effective treatment for colds
Gives lasting relief from colds
Drives out colds
Breaks up colds
Attacks the cold at its cause
A specific against colds
Stops any cough

The Food and Drug Administration is apparently of the opinion that a product containing therapeutically-effective ingredients can hardly do more than give temporary relief from certain symptoms of a simple cold or cough due to a simple cold. It believes that labels should state specifically what symptoms the product relieves, such as throat irritation or excess nasal secretions, etc. Furthermore, if the word *cold* is used in the labeling in a manner which might give the user the idea that the product is a competent treatment for a cold, the Administration believes that a specific disclaimer or denial should be included in its indications for use.

CHECK UP ON YOUR GUARANTIES

The Food and Drug Administration reports that it has seen copies of manufacturers' guaranties which do not meet the requirements of regulations issued under the Federal Food, Drug, and Cosmetic Law because they are too general in nature. The Administration does not believe that a "guaranty under all laws and regulations affecting the distribution of a product" is adequate. To give you proper protection a guaranty should state specifically that products issued under it are not adulterated or misbranded within the meaning of the Federal Food, Drug, and Cosmetic Act.

A guaranty may be limited to a specific shipment or delivery of an article, in which case it may be a part of or attached to the invoice or bill of sale covering such shipment or delivery; or a guaranty may apply to any shipment or delivery of an article made by a manufacturer or wholesaler to a specific retailer at any time. The two forms suggested in the federal regulations are as follows:

LIMITED GUARANTY

(Name of person giving the guaranty or undertaking) hereby guarantees that no article listed herein is adulterated or misbranded within the meaning of the Federal Food, Drug, and Cosmetic Act, or is an article which may not, under the provisions of section 404 or 505 of the Act, be introduced into interstate commerce.

(Signature and post-office address of person giving the guaranty or undertaking.)

CONTINUING GUARANTY

The article comprising each shipment or other delivery hereafter made by (name of person giving the guaranty of undertaking), to, or on the order of (name and post-office address of person to whom the guaranty or undertaking is given) is hereby guaranteed, as of the date of such shipment or delivery, to be, on such date, not adulterated or misbranded within the meaning of the Federal Food, Drug, and Cosmetic Act, and not an article which may not, under the provisions of section 404 or 505 of the Act, be introduced into interstate commerce.

(Signature and post-office address of person giving the guaranty or undertaking.)

Ersatz Blood

by RICHARD A. DENO, Ph.D.

ASSISTANT PROFESSOR OF BIOLOGICAL SCIENCES, RUTGERS UNIVERSITY COLLEGE OF PHARMACY

SHERMAN'S definition of war was never more apt than it is to-day, yet war does stimulate some types of scientific research and knowledge useful in times of peace may be acquired by the search for substitutes for essential materials whose normal source is cut off or for materials which are needed in larger quantitites than usual.

During World War I countless lives were lost which could have been saved had blood transfusions on a large scale been possible at the front. The studies of Dr. Karl Landsteiner, Nobel

Laureate, had shown the necessity for typing blood to be used in transfusion, and for matching the blood of the donor with that of the patient. But this took time, and even when laboratory facilities were available precious hours were lost in locating a suitable donor. To save this time Dr. O. H. Robertson, then at the front, conceived the idea of a blood bank—a reserve supply of the four types of blood kept under refrigeration, properly tagged and preserved. It was still necessary to determine the type of blood of the patient, and a further disadvantage was that stored blood kept for only two or three weeks, even when properly refrigerated.

BLOOD BANKS

However, the blood bank gained in favor following the World War, first in Russia, where blood was even taken for storage from the cadavers of healthy persons who had met violent and sudden deaths, and within recent years in America. Dr. Bernard Fantus, well known to pharmacists for his many contributions as a member of the Revision Committee of the National Formulary until his death last year, did much to develop the blood bank in America, at the Cook County Hospital in Chicago.

Despite the fact that blood, either transfused directly from donor to patient or taken indirectly from the blood bank, is the best possible remedy for extensive hemorrhage, the necessity for typing and its poor keeping qualities are serious disadvantages which make an effective substitute desirable. In a hospital in Chicago these disadvantages may not be serious, but in a bombed village in England they are usually unsurmountable. So medical scientists in England and America have feverishly sought a substitute—one which need not be matched and which will keep well for months or even years.

EVALUATION OF SUBSTITUTES

In a recent issue of *The Lancet*, British medical journal, G. A. H. Buttle and his associates from the Army Blood-Supply Depot and the Department of Physiology, Middlesex Hospital, have given an accurate experimental evaluation of various blood substitutes that have been used in the treatment of acute hemorrhage.

Left: Blood is taken from the donor by an experienced physician with every precaution for sterility.

In their tests, cats were used. One half of the calculated blood volume of the animal was removed. The bleeding was done fast enough to leave the cat barely alive—with a very low blood pressure, no pulse apparent and gasping for breath. This condition—shock due to acute hemorrhage—results in death unless treatment is given at once, and is comparable to hemorrhagic shock in man due to rapid bleeding as from a wound produced by shrapnel.

To test the various blood substitutes a volume five-sixths of the amount of blood withdrawn was injected, each substitute being tried out on several cats. The deficiency in volume of one-sixth of that withdrawn was to allow for the natural mobilization of the blood reserves, such as are found in the spleen. Evaluation of the various substitutes was based on the increase of the blood pressure, and the return of the rate and rhythm of breathing to normalcy. To check on the various substitutes used other cats were bled. One group received no treatment while a second group was given transfusions of cat blood. Every cat in the first group died while all of those in group two made complete and rapid recoveries.

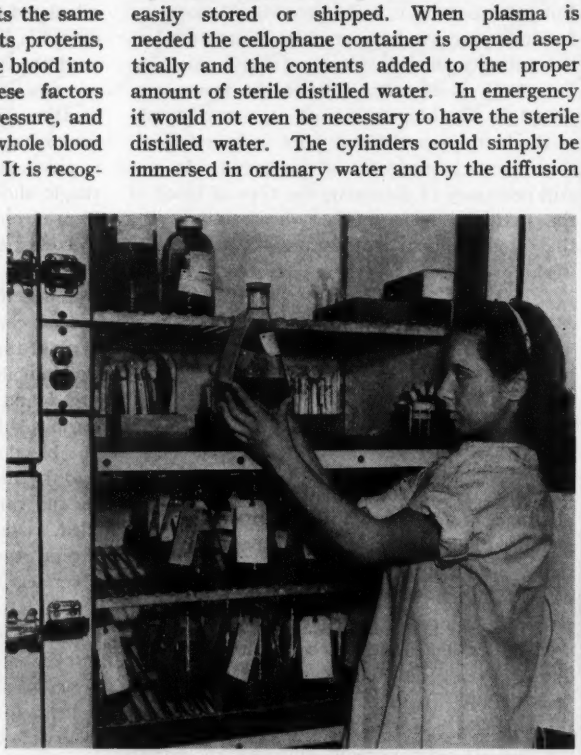
The results of the experiments were so clear-cut that the physicians were able to get a definite series of substitutes ranging in value from excellent to very poor. It was concluded that blood plasma (whole blood minus cells) is an entirely satisfactory substitute for whole blood, and that no other substitute solution is such. Of the others that were tested, Buttle and his associates conclude that serum (plasma minus the substances which produce clotting) ranks next, followed by hemoglobin-Ringer's solution; acacia in physiological salt solution; red blood cells suspended in an isotonic solution of salts; physiological salt solution; and isotonic solution of glucose. These are arranged in the descending order of their values. Since several of the substitutes are pharmaceutical preparations it is of interest to note what Buttle and others say concerning their use as substitutes for blood.

BLOOD PLASMA

Plasma makes up about 55 per cent of the volume of the blood, contains several important proteins and salts, and differs from whole blood chiefly in its inability to carry oxygen. In the treatment of hemorrhagic shock where no more

than half of the total volume of blood is lost this difference is not of vital importance. More important are the facts that plasma has about the same viscosity as blood; it exerts the same osmotic pressure; and, because of its proteins, it prevents the loss of liquid from the blood into the tissues (edema). Each of these factors operates in maintaining the blood pressure, and plasma is practically as effective as whole blood in fulfilling this important function. It is recognized, of course, that if more than half the total blood is lost the need for replacement of the cells becomes of increasing importance.

Many months before the published report of the experimental work on cats the value of plasma as a blood substitute was known. Since plasma keeps for years without deteriorating and does not require matching it is superior to whole blood in times of emergency. Since last August some 17,000 persons in and around New York City have given over 8000 quarts of blood for its plasma, which is sent to England to save the lives of wounded Britishers—both soldiers and civilians. The cells are allowed to settle or are separated by centrifuging, and the plasma is tested to insure the absence of germs before it is sent abroad *via* plane or fast ship. Collection of this plasma for Britain has been supervised by the American Red Cross and the Blood Transfusion Betterment Association—an organization started eleven years ago by the New York Academy of Medicine to promote research in blood transfusion, as well as to perfect the system for recruiting and paying donors, and to give advice on the legal aspects of transfusion.



Right: The first Blood Bank in the United States, located in Cook County Hospital, Chicago.

DRIED PLASMA

The next advance is foreshadowed in reports on the use of dried plasma. In a recent issue of the *Journal of the American Medical Association* the doctors Hartman of the Henry Ford Hospital, Detroit, tell of their work in drying plasma in cellophane cylinders. The product is a flaky or crystalline desiccated plasma which can be easily stored or shipped. When plasma is needed the cellophane container is opened aseptically and the contents added to the proper amount of sterile distilled water. In emergency it would not even be necessary to have the sterile distilled water. The cylinders could simply be immersed in ordinary water and by the diffusion of water inward a satisfactory plasma would result. Since bacteria and pyrogens do not penetrate the cellophane this plasma is perfectly safe to use. It requires little imagination to visualize the dramatic possibilities of such a product. As yet the use of dried plasma is in the experimental stage.

BLOOD SERUM

Serum, the next best substitute on Buttle's list, is definitely inferior to plasma because of the development of toxic substances during the clotting process in which the serum is separated from the cells. These toxic substances remain in the serum and when this is given in large amounts, as in a transfusion, an undesirable effect is produced in the small arteries. Experiments with dried serum give results comparable to those with undesiccated serum, and these results bear out reports from earlier experiments.

HEMOGLOBIN-RINGER'S

Hemoglobin in a solution of salts isotonic to red blood cells (hemoglobin-Ringer's solution) has never been used extensively other than in experiments in physiology. One advantage lies in its capacity for transporting oxygen, and a second is the stimulation to the formation of blood cells which it is supposed to produce. The results reported in *The Lancet* are not so good as with plasma. The explanation for the irregular results obtained lies in the excretion of the hemoglobin within two or three days, and the possibility of obstruction of some of the kidney passages during this excretion.

ACACIA

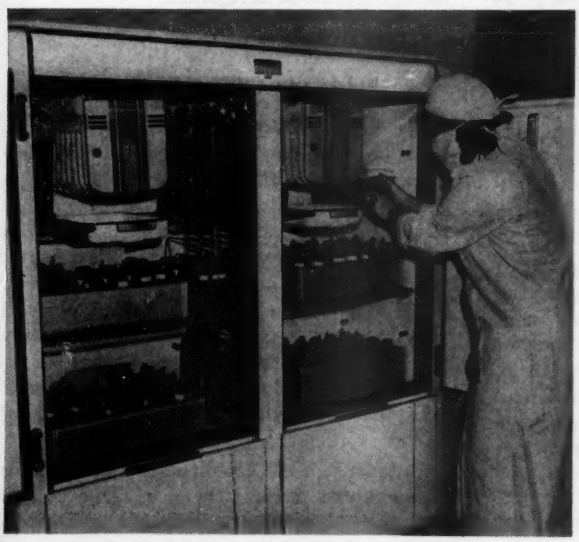
Acacia in physiological salt solution was developed during the World War, also by the British. Its value depends on the fact that a 6 percent solution of acacia has an osmotic pressure and viscosity approximately the same as that of whole blood. Poor results were obtained in the experiments of Buttle, and these are blamed on the variability of acacia and on the fact that it leaves the blood stream rapidly. In general British workers now condemn this solution from both the experimental and clinical points of view. In this country Hartman and others have used acacia solution in the treatment of nephrosis and hemorrhagic shock with excellent results.

OTHER SUBSTITUTES

The use of red blood cells in isotonic solutions of salts was to check on the importance of an ingredient capable of carrying oxygen. The inferior value of this solution can be learned from the fact that three out of six animals died when it was used as the substitute for the blood withdrawn.

The records of physiological salt solution and isotonic dextrose solution, preparations similar to products in the U. S. P. and the N. F., were the worst of all. Of five animals given the saline solution and five given the dextrose solution none was alive after one hour and forty minutes. These pharmaceuticals are inexpensive and easy to prepare, but are very inferior as substitutes chiefly because they leave the blood stream so rapidly that they are unable to increase the blood pressure for more than a brief time.

From the experimental and clinical tests of the British and American workers, and the cooperative efforts of the New York groups in securing plasma, an American project is evolving which may be of inestimable value in time of war, and which will certainly provide a reservoir of effective transfusion material for the needs of times of peace. Mr. Davis, of the Red Cross, has stated that the New York project will devote full time to the accumulation of a national defense reservoir of blood plasma. This material will be put at the disposal of the Army and Navy, but in times of emergency will serve as an international bank to be drawn on for the benefit of victims of disasters of all kinds where "ersatz" blood is needed. Projects similar to the one in New York are being developed by hospitals in other American cities.



Left: Blood in various stages of processing is stored in huge refrigerators.

Photos by Wide World

NEW REGULATIONS ON DRUGS "FOR PRESCRIPTION USE ONLY"

GOVERNMENT SEEKS TO STOP OVER-THE-COUNTER SALE OF PRODUCTS NOT LABELED WITH ADEQUATE DIRECTIONS FOR USE

IF a drug label bears the statement *"to be used only by or on the prescription of a physician, dentist, or veterinarian,"* that label (1) must not bear any statement of the conditions for which the product is to be used, (2) must not bear any directions for use, and (3) must bear a quantitative statement of its active ingredients unless it is an official product, according to new regulations proposed and published by the Food and Drug Administration on January 9th. Interested persons were given thirty days in which to submit written statements for consideration before final action was to be taken in respect to issuing the official regulations.

This action was not unexpected as neither the government nor pharmacists have been satisfied with the manner in which the "prescription use only" exemption as provided in previous regulations was working out in practice.

When the new Federal Food, Drug, and Cosmetic Law was enacted it provided that a drug is misbranded if its label does not contain adequate directions for use. The law provided, however, that in cases where adequate directions for use were not necessary for the protection of public health, the Administrator should promulgate regulations exempting such drugs from the requirement.

THREE EXEMPTIONS

Three such exemption regulations were issued. One exempt common drugs for which adequate directions are known to the ordinary individual, one exempt drugs for manufacturing use and the third exempt drugs used by a physician or on his prescription. It is the latter exemption which has caused trouble because its purpose has been circumvented by many manufacturers and the pharmacist has not known whether to follow the label statement in all cases, to ignore it in some cases and observe it in others, or to ignore it altogether.

Not only have manufacturers of prescription specialties rightfully used the "prescription use only" legend on the labels of their products, but some manufacturers of such products as aspirin tablets, quinine sulfate pills, and compound cathartic pills in bulk have taken advantage of the exemption to absolve themselves of the responsibility and effort of preparing adequate directions for use on their labels. These manufacturers have assumed that pharmacists would realize that they could sell aspirin tablets without a prescription and they have as much as said that the legend could be disregarded.

PHARMACISTS CONFUSED

The pharmacist has been confused by this situation and, being told to ignore the warning in some cases and to observe it in others, he has been in a quandary over just what to do. The result has been that many products so labeled have been sold over-the-counter and the government wants to stop this practice. There is no justification for the use of this legend except in the case of drugs exclusively intended for prescription use and pharmacists should refuse to accept bulk aspirin tablets or other such products that bear the "prescription use only" legend.

In order to avail himself of the "prescription use only" exemption, the manufacturer must make adequate directions for the use of his products available to physicians, dentists, and veterinarians in scientific publications or otherwise if such directions are necessary. THE AMERICAN PHARMACEUTICAL ASSOCIATION believes that pharmacists licensed by law to compound prescriptions should have such information available to them in order that they can fulfill adequately their obligations to physicians and the public in the compounding of prescriptions. The ASSOCIATION has filed a formal request with the Food and Drug Administration for consideration of this point in drafting the final regulations.

The new regulations emphasize the need for complete files of information on new prescription specialties in prescription department libraries. Now, more than ever, physicians will look to pharmacists for data on the composition, properties, uses, dosage, and form of the newer items.

RELABELING BY PHARMACISTS

The new proposed regulations provide that the exemption shall expire if the drug labeled for "prescription use only" is sold other than on prescription. Any person who sells such a product over-the-counter is guilty of misbranding *unless* he has relabeled it to provide adequate directions for use. In other words, if the pharmacist relabels such a product correctly and assumes the responsibility for the labeling he is not guilty of misbranding. There are certain drugs, of course, which have been designated as unsafe for self-medication and which cannot be labeled with adequate directions for use.

The purpose of the exemption is to remove the necessity for stating adequate directions for the use of a drug in its labeling if it is to be used only on prescription. If the pharmacist is in a position to relabel the drug with adequate directions for use he cancels the need for the exemption and its expiration causes no harm.

In the case of repackaging bulk goods as, for example, dispensing four ounces of a preparation that is purchased by the gallon, if the gallon bottle is properly labeled with adequate directions for use and appropriate warnings and the pharmacist copies the label verbatim, he is safe. If he changes the wording, however, he assumes full responsibility.

The new regulations should clarify the pharmacist's thinking in regard to handling drugs which are distributed with the "prescription use only" legend. He should dispense such products only on prescription unless he is able to relabel them to provide adequate directions for use and unless he is willing to accept full responsibility for the accuracy of such labeling. Every product which goes out of the pharmacist's hands, with the exception of physician's prescriptions and those common drugs for which adequate directions are known to the ordinary individual, *must be labeled with adequate directions for use.* It is the view of government officials that no product should go out over the counter and reach the user's hands bearing on its label the statement, "Caution: To be used only by or on the prescription of a physician."

GOVERNMENT NEEDS PHARMACOLOGISTS

Pharmacologists are needed to fill positions in the Federal Government. The United States Civil Service Commission has announced that applications for these positions will be rated as received at its Washington office until December 31, 1941.

There are four grades of positions with salaries ranging from $2600 to $4600 a year, less a retirement deduction of 3½ percent. Positions of Junior Pharmacologist and Junior Toxicologist may also be filled from the registers of this examination by certification of appropriate eligibles who are willing to accept the salary of $2000 a year.

The duties of these positions include planning or conducting research upon the pharmacological or toxicological action of organic or inorganic substances, and examining imported or domestically manufactured drugs to determine their strength and purity. Applicants must have completed a 4-year college course with major study in pharmacology, toxicology, biochemistry, pharmacy, or other closely related subjects. In addition, appropriate experience in scientific investigative work is required. Partial substitution of certain graduate study may be made for the required experience.

Further information and application forms may be obtained from the Secretary of the Board of U. S. Civil Service Examiners at any first- or second-class post office, or from the U. S. Civil Service Commission, Washington, D. C.

EISENTRAUT'S WINS

PHARMACY WEEK WINDOW CONTEST

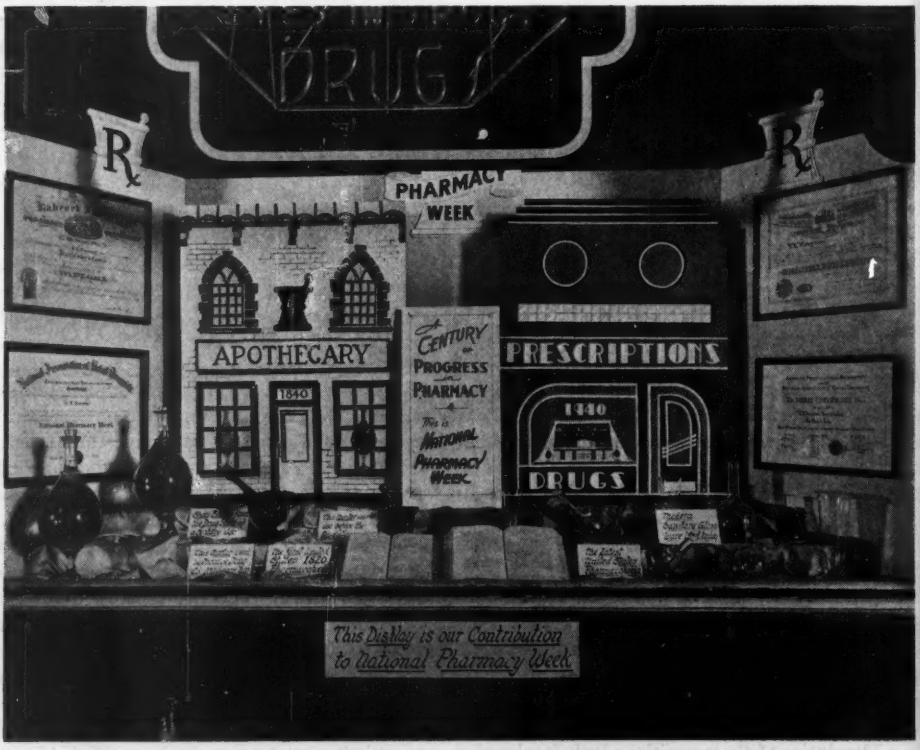
EISENTRAUT'S Pharmacy, of Des Moines, has been awarded the Grand Prize in the 1940 National Pharmacy Week Window Display Contest, according to the announcement of John E. O'Brien, chairman of the ASSOCIATION'S Pharmacy Week Committee. The winning window depicted a century of progress in the profession, contrasting the apothecary shop of 1840 with the modern pharmacy of 1940.

Honorable Mention Awards were made to the Speicher-Grady Company, Johnstown, Pa.; O. U. Sisson, Chicago; Weber & Judd, Rochester Minn.; Webb and Rogers, San Rafael, Cal.; Mozer's Pharmacy, Denver; E. Cermak, Omaha; Mills Drug, Rapid City, S. D.; Frank Nau, Portland, Ore.; Hay's Drug Store, Portland, Me.; and Schrader's Pharmacy, Baltimore. Thirty-one States submitted displays.

Awards for the Association Group went to the Ohio Valley Druggist's Association; the Dayton Retail Druggist's Association and the Pennsylvania State Pharmaceutical Association. Awards in the College Group went to the Louisville College of Pharmacy; the College of Pharmacy of Columbia University; and the Philadelphia College of Pharmacy and Science.

THE WINNER

Llewellyn L. Eisentraut, who conceived and constructed the winning display, has received national recognition for his Pharmacy Week



The display which won the Grand Prize for 1940.

Above: Mr. Eisentraut and his son in the prescription department.

windows six times during the past nine years but this is the first time he has won the Grand Prize of the F. W. D. A. cup.

"Pharmacy Week windows are not a contest with us, however," says Mr. Eisentraut. "They are a method through which we can dramatize our profession and convey to the public an impression of our professional character.

"We attribute our continual increase in prescription practice to the effectiveness of our efforts to impress upon our customers the fact that we consider our prescription practice and supplying family medicines the most important phase of our business."

Mr. Eisentraut has served the Polk County Retail Druggists Association as president for one year and as secretary for two years. He is at present a member of the legislative committee of his State pharmaceutical association, serving his second term.

Below: General view of Eisentraut's Pharmacy showing visible prescription room.

In the living quarters of one narcotic addict government agents found 235 empty paregoric bottles, originally containing a total of 334 ounces purchased from 74 drug stores over a period of three months.

PAREGORIC IS A PUBLIC ENEMY

by H. J. ANSLINGER

COMMISSIONER, U. S. BUREAU OF NARCOTICS

DIVERSION BY ADDICTS AND NEED FOR CONSERVING THE COUNTRY'S STOCKS OF OPIUM DEMAND PROMPT ELIMINATION OF ALL EXEMPT NARCOTICS BUT CODEINE PREPARATIONS

IN MY many years of experience in the regulation of narcotic drugs I have found no group more law-abiding than the pharmacists of America. They have consistently shown a true consciousness of their obligations in the handling of narcotics. It is decidedly significant that with more than 51,000 pharmacies registered under the federal narcotic laws we seldom find it necessary to report to state boards of pharmacy more than sixteen or seventeen cases of violations by such registrants in the course of a year. If every group registered to engage in some phase of narcotic production or distribution were as law-abiding as this the job of regulating narcotics would be relatively easy.

I am anxious that this record shall be kept clean. Yet, it is being threatened to-day by a condition for which the pharmacist is in no way responsible but against which he must be alert to protect himself.

As we have been successful in cutting off the illicit supply of one narcotic, addicts have found ways and means of using some other narcotic and it has been our job to keep plugging up these leaks as fast as they are discovered. Each step in the process brings us nearer to our goal of complete control but has brought new problems with which to contend. As it has become harder and harder for the addict to obtain narcotics he has become more desperate in his efforts to thwart the law and more ingenious in his methods of satisfying his craving.

To-day the problem is with paregoric. Addicts have perfected a simple method of "cracking" this preparation to obtain an extract which can be injected with a syringe and needle.

We are raiding the living quarters of such addicts and finding hundreds of empty one- and two-ounce paregoric bottles bearing druggists' labels. The illustration which accompanies this article shows a group of 235 such bottles, originally containing 334 ounces of paregoric purchased by an addict from 74 drug stores over a period of three months.

Under the present law the pharmacist is a co-victim with society to this growing menace. In practically every state the law permits the purchase of paregoric over the counter. Knowing this, addicts flock to the drug store and on the pharmacist falls the burden in each instance of deciding whether to make the sale or whether to

refuse. If he does not know the would-be purchaser he runs the risk of inconveniencing and offending a legitimate customer. Even when the purchaser looks honest and respectable and the quantity requested is not of itself suspicious he may yet be victimized since it is often not the addict himself who makes the purchase. Even if the druggist is careful not to repeat a sale to the same person, this still does not prevent the abuse, since the addict, schooled in the tricks of his fellows, makes a point of approaching a different pharmacist on each return trip. Moreover, in some of our larger cities an addict could buy two ounces every day and yet never visit the same pharmacy twice within a year.

This new practice has increased the consumption of paregoric tremendously. Fifteen times more paregoric per capita is being sold in the United States than in Canada.

CONSERVATION OF OPIUM

This situation has been slowly developing for a number of years but it has become a pressing problem to-day because the present world conditions make it imperative that we conserve our reserve stocks of opium and coca leaves for legitimate medical needs.

It has therefore become necessary, in our opinion, to remove paregoric and other preparations which might be diverted to illicit uses from the exemption provision of State narcotic acts and the Federal narcotic act. I have written a letter to the Governor of every state which has a Uniform Narcotic Act setting forth the essential points of the present situation and soliciting his coöperation in amending the law of his state to make it read as follows:

Section 8 (*Preparations exempted*). Except as otherwise in this act specifically provided, this act shall not apply to the following cases:

Administering, dispensing, or selling at retail of any medicinal preparations that contain in one fluid ounce, or if a solid or semi-solid preparation, in one avoirdupois ounce, not more than one grain of codeine or of any of its salts.

The exemption authorized by this section shall be subject to the following conditions: (1) that the medicinal preparation administered, dispensed, or sold, shall contain, in addition to the narcotic drug in it, some drug or drugs conferring upon it medicinal qualities other than those possessed by the narcotic drug alone; and (2) that such preparations shall be administered, dispensed, and sold in good faith as a medicine, and not for the purpose of evading the provisions of this Act.

Nothing in this section shall be construed to limit the quantity of codeine or of any of its salts that may be prescribed, administered, dispensed, or sold, to any person or for the use of any person or animal, when it is prescribed, administered, dispensed or sold in compliance with the general provisions of this Act.

A similar amendment to the federal narcotic laws will be introduced in Congress as soon as possible.

THE CASE OF CODEINE

Why do we propose to exempt preparations containing not more than one grain of codeine to the ounce?

In the first place, we have no evidence of diversion of exempt preparations containing codeine, and our investigations have yet to reveal any practical method of obtaining the codeine from the type of preparations in which it is largely used.

Secondly, we believe that codeine in small quantities is necessary in an effective cough

Blackstone Studios

H. J. ANSLINGER

syrup and we do not want either to ban the sale of these products or to decrease their therapeutic value if we can possibly avoid it.

YOUR COÖPERATION

Frankly, there is considerable evidence to support the belief that paregoric never should be administered except on the instructions of a physician and I feel also that most conditions in which lead and opium wash is indicated are sufficiently serious to need the care of a doctor.

For several years the pharmacists of the District of Columbia and California have not sold paregoric except on prescription and they have felt no hardship.

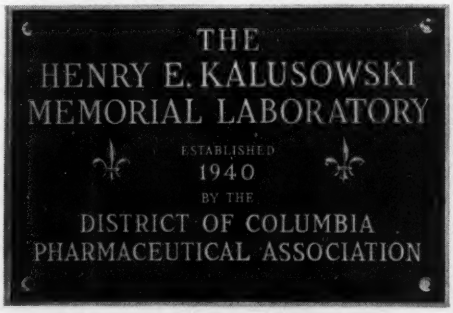
However, hardship or no hardship, this change is necessary in order to eliminate the illicit consumption which is unnecessarily depleting our reserves of opium at a time when they are difficult to replace due to world conditions.

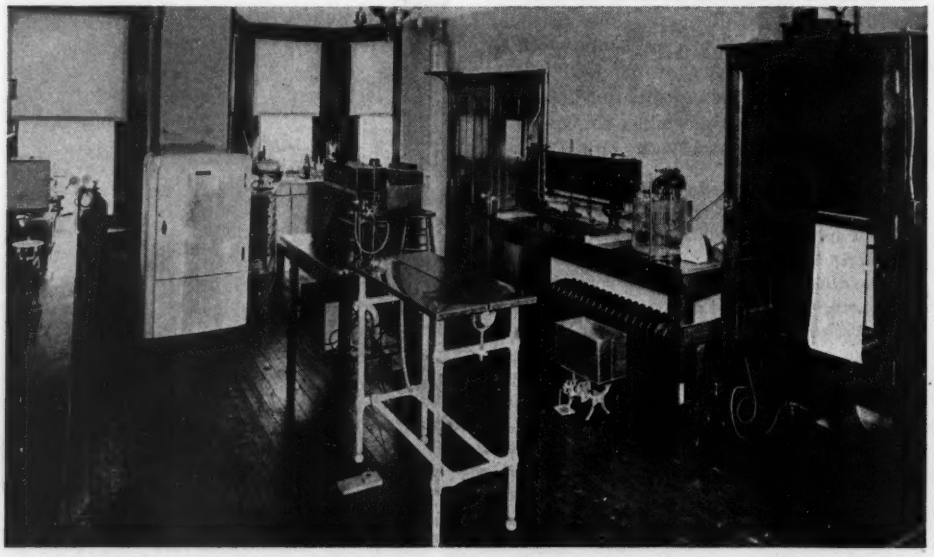
The big job of our Bureau is to track the addict, and right now his path leads in and out of retail drug stores. I am sure that you do not seek his patronage. You do not even want him to come into your pharmacy for he not only is usually a shoplifter and general thief, but frequently is a more dangerous, vicious criminal. The elimination of the sale of paregoric over the counter will remove his primary reason for coming to your store and to that extent will be a protection and a relief to you.

I ask your careful consideration of the conditions which have made this step necessary and I request your coöperation in effecting the change.

D. C. PHARMACISTS DEDICATE LABORATORY

New laboratory of the George Washington University School of Pharmacy, established by the District of Columbia Pharmaceutical Association and dedicated to Henry E. Kalusowski, former Dean of the school. Dedication ceremonies were held on January 24th when Cloyd Heck Marvin, President of the University, accepted the gift.





Druggists' Digest

OF NEW FORMULAS, RECENT PHARMACEUTICAL DEVELOPMENTS, AND OTHER PROFESSIONAL DATA

DANGERS OF MINERAL OIL IN NOSE DROPS

Alarmed by the increasing number of reports of "lipid pneumonia" caused by the entrance of oil into the lungs, the Council on Pharmacy and Chemistry of the American Medical Association has published a new report by Paul R. Cannon, M.D., of the Department of Pathology, University of Chicago (*Jour. A. M. A.*, 115, 2176–2179). Past reports have indicated that the aspiration of oils is dangerous primarily in the case of children and debilitated, aged adults, but Dr. Cannon has found that healthy adults also are susceptible. Diagnosis is difficult and in many cases the condition is not discovered until microscopic examination of the lungs after death. Although oils taken by mouth sometimes enter the trachea and reach the lungs, the chief target of the A. M. A. report is liquid petrolatum used as a vehicle for medicated nasal drops because, since this substance cannot be metabolized by the body, it remains as a foreign body irritant in the lungs.

The report should be heeded by pharmacists. They might well do the following:

(1) Suggest the prescribing of aqueous solutions or medicated inhalers to relieve nasal congestions.

(2) If the physician insists upon an oily base, suggest the use of relatively non-toxic vegetable oils such as olive oil, cottonseed oil, or poppy seed oil instead of liquid petrolatum.

(3) Caution customers not to use oily nasal drops immediately before retiring since lying in a prone position favors the gravitation of oil into the lungs.

(4) Urge mothers to exercise great care in administering cod liver oil or liquid petrolatum to children; to give small, divided doses; to use vitamin concentrates in place of cod liver oil; to avoid forcible administration while the child is crying; cautioning the mother not to feed debilitated infants while they are lying on their backs; and urging her not to prop the nursing bottle on a pillow with the nipple in the baby's mouth.

"Lipid pneumonia," says Dr. Cannon, "being essentially a man-made disease, can be prevented largely by the extent to which the conditions now known to favor its development are eliminated."

SULFANILAMIDE OINTMENT

Physicians who have been using sulfanilamide topically may be expected to prescribe an ointment of this drug, the formula for which appeared in the Queries and Minor Notes section of the *Journal of the American Medical Association* for January 25th. The ointment is described as suitable for use on surface wounds or on mucous membrane surfaces such as the conjunctivas. The formula is as follows:

Sulfanilamide	10 Gm.
Hot Water (almost boiling)	25 cc.
Dissolve and Filter	
Sodium Alginate	4 Gm.
Boiling Water	75 cc.
Emulsify and strain through fine gauze.	

Add the sulfanilamide solution to the sodium alginate suspension and incorporate the mixture in the following base:

Anhydrous Wool Fat	16 Gm.
Sodium Chloride	1 Gm.
dissolved in water	4 cc.
White Petrolatum	78 Gm.

Sodium Alginate is a colloidal substance obtained from seaweed and is available from R. F. Revson Company, 91 Seventh Avenue, New York, N. Y.

DISINFECTING SHOES AND SOCKS AFTER ATHLETE'S FOOT

Always a problem during and after a siege of athlete's foot is how to disinfect the contaminated shoes and stockings to prevent reinfection of the feet and the prolongation of the disease condition. Pharmacists should be in a position to give competent advice on this subject and some may be interested in rendering their customers a "disinfecting service" for shoes. Information published in a recent issue of the *Journal of the American Medical Association* recommends the following methods of disinfection:

Cotton socks should be boiled for ten minutes or immersed for one-half hour in a 1:1000 solution of bichloride of mercury and rinsed. Wool and silk stockings, which may be damaged by boiling, should be placed in a covered box containing a dish of Solution of Formaldehyde, left in the vapor for twenty-four hours and aired for at least twenty-four hours.

Shoes may be placed in a closed box with a dish of Solution of Formaldehyde, left for twenty-four hours, and then aired for twenty-four hours; they can be sponged with a ten per cent solution of Formaldehyde and then aired for twenty-four hours; or they may be sprayed with Solution of Formaldehyde, using an atomizer, once a day for three days. One spray in the toe of the shoe and one in the heel is sufficient for each application. If the shoes are sprayed they should not be worn for at least eight hours after the last treatment. Formaldehyde vapor is irritating to the eyes, the respiratory tract, and the skin so the spraying should be done in a well ventilated room, the hands covered with rubber gloves and the shoes held well away from the face.

SULFATHIAZOLE IS COUNCIL-ACCEPTED

The Council on Pharmacy and Chemistry of the American Medical Association has accepted sulfathiazole for admission to New and Nonofficial Remedies and has recognized the brands of Lederle, Maltbie, Merck, Squibb, and Winthrop.

In accepting this third member of the sulfonamide family, the Council recognized its use in the treatment of pneumococcic pneumonia, several infections due to Staphylococcus aureus; tissue infections produced by E. coli; and gonorrhea in the male. Like sulfanilamide, it appears to render the blood, spinal fluid, urine, and other tissue fluids unfavorable as a medium for supporting the active multiplication of susceptible bacteria and thus the tissue invasion of these organisms is prevented, the production of toxic substances reduced, and the antibacterial immune mechanisms of the body are permitted to complete the recovery from the infection.

Pharmacists should note that sulfathiazole occurs as a white, practically odorless and tasteless, crystalline powder. It is soluble in hot water, hot ethyl, methyl and isopropyl alcohols, glacial acetic acid pyridine, dilute mineral acids, and alkali metal hydroxides and carbonate solutions. It is moderately soluble in hot acetone. It is slightly soluble in ethyl, methyl, and isopropyl alcohols. It is very slightly soluble in water. It is insoluble in benzene, chloroform, ether, ethyl acetate, and ethylene dichloride.

To the best of present knowledge, sulfathiazole can be used concurrently with any drugs with the possible exception of magnesium sulfate and other saline laxatives.

AN ALUMINUM SUBACETATE OINTMENT

A new one per cent aluminum subacetate ointment for use in the sub-acute state of various skin conditions when the lesions begin to dry has been developed in the Skin Clinics of the Cook County Hospital, Chicago, by H. A. Dyniewicz, of the University of Illinois College of Medicine, and is being considered for the N. F. The formula for the new ointment is as follows:

Solution of Aluminum Subacetate...	12 cc.
Distilled Water.....	12 cc.
Anhydrous Lanolin.....	19 Gm.
White Petrolatum.....	57 Gm.

Triturate the lanolin and petrolatum in a mortar and add the mixture of the Solution of Aluminum Subacetate and distilled water in divided portions, triturating after each addition.

Here is a preparation which will interest your general practitioners as well as such derma-

tologists as you serve. It is a soothing ointment with a mild astringent action and may be suggested for use in the sub-acute state of such dermatoses as irritant dermatitis and weeping eczemas when the lesions begin to dry. Compresses of Solution of Aluminum Subacetate (1–10) which are used in acute conditions may be substituted by the Ointment of Aluminum Subacetate when drying is noticed. It is less cumbersome and easier to apply than the continuance of a compress. The patient need not stay away from his employment, after the acute symptoms subside, to continue the desired therapy of aluminum subacetate with the added beneficial, soothing, and softening effects of lanolin and petrolatum. If a more drying ointment is desired, half of the lanolin and petrolatum may be replaced with zinc oxide ointment using the following formula:

Solution of Aluminum Subacetate	12 cc.
Distilled Water	12 cc.
Ointment of Zinc Oxide	38 Gm.
Anhydrous Lanolin	9.5 Gm.
White Petrolatum	28.5 Gm.

—N. F. Bull. 9, 64 (1940)

VETERINARY SKIN LOTION

Several years ago Dr. S. L. Hilton, of Washington, D. C., working in conjunction with a veterinarian, developed a mixture of resorcin, salicylic acid, menthol, and methyl salicylate for the treatment of various skin conditions of the eczema type in animals. Its use among veterinarians has grown until to-day Dr. Hilton makes it in gallon quantities. He has suggested it for inclusion in the National Formulary, made according to the following formula:

Alcohol	50.0 cc.
Glycerin	200.0 cc.
Tragacanth (*ribbons*)	8.0 Gm.
Menthol	2.0 Gm.
Methyl Salicylate	2.0 cc.
Salicylic Acid	10.0 Gm.
Resorcin	20.0 Gm.
Distilled Water, *q. s.*	1000.0 cc.

Add 200 cc. of water to the tragacanth and allow to stand for 48 hours, stirring occasionally. Dissolve the menthol and salicylic acid in the alcohol. Dissolve the resorcin in 200 cc. of water. To the tragacanth jelly add the glycerin, mix thoroughly, add the alcoholic solution and after mixing, add the solution of resorcin and a sufficient quantity of water to make 1000 cc. After mixing, pass through a homogenizer.

NEW MEMBER OF N. F. COMMITTEE

Harvey B. Haag, Ph.G., B.S. in Pharm., M.D., Professor of Pharmacology of the Medical College of Virginia, Richmond, has been elected to the Committee on National Formulary by the Council of THE AMERICAN PHARMACEUTICAL ASSOCIATION. He succeeds Dr. Bernard Fantus, deceased, and will serve as chairman of the Sub-committee on Pharmacology and Posology.

The National Formulary is fortunate in securing the services of Dr. Haag, for his training in both pharmacy and medicine will enable him to be of inestimable assistance in the revision work. Dr. Haag has made between forty-five and fifty original contributions to the literature of pharmacology and his work during the past few years on the toxicity and irritant properties of tobacco smoke has won widespread recognition.

Photo by Schuyler Studios

DR. HARVEY B. HAAG

NEW SURVEY OF PRESCRIPTION INGREDIENTS

Sodium salicylate is the most frequently prescribed drug in Lafayette, Indiana, according to a new survey made by R. E. Heine and C. O. Lee, of the School of Pharmacy, Purdue University, published in the February Bulletin of the National Formulary. This drug, always prescribed in combination and never alone, occurred 502.6 times per 10,000 prescriptions. Next in popularity were the following:

Codeine sulfate, used 464.5 times.
Compound Elixir of Pepsin, used 398.43 times.
Acetophenetidin, used 302.08 times.
Sodium Bromide, used 257.81 times.
Tincture of Nux Vomica, used 233.75 times.
Empirin Compound with Codeine Phosphate, used 222.9 times.
Ammonium Chloride, used 221.87 times.
Citrated Caffeine, used 218.75 times.
Cheracol, used 217.18 times.
Acetylsalicylic Acid, used 211.97 times.
A. S. A. and Codeine Compound, used 206.77 times.
Morphine Sulfate Tablets, used 201.55 times.

(Note: If Empirin Compound and Codeine Phosphate and A. S. A. and Codeine Compound had been classed as one item it would have ranked third on the list.)

The survey covered 19,242 new and 15,851 refill prescriptions (35,093 total) filled in five pharmacies. Two were neighborhood pharmacies, two were downtown stores, and one was in an outlying business district.

A total of 689 items were found in these prescriptions but only 35 percent of these occurred more than ten times per 10,000 prescriptions.

Of the 19,242 new prescriptions 12,767 were classed as narcotic.

Of the 689 items used in the 35,093 prescriptions, 54.13 percent were proprietary. In the U. S. P.-N. F. Survey of 1931–1932, 41.07 percent of the ingredients were proprietary.

ABSORBENT OINTMENT BASE

An ointment base which will absorb up to an equal weight of liquid without separating on standing may be made by adding one part of anhydrous lanolin to three parts of white petrolatum, according to H. A. Dyniewicz, of the University of Illinois College of Medicine, who developed the preparation for use in the Cook County Hospital Skin Clinics and has named it "Hydrophile Petrolatum."

—*N. F. Bull. 9, 65 (1940)*

LIQUEFYING OINTMENTS

Substituting a gel, consisting of one part of hydroxystearic acid with four parts of heavy liquid petrolatum, for the wax or other solidifier in ointments, George W. Fiero, of the School of Pharmacy of the University of Buffalo, has reported the development of a jellified ointment of soft consistency which liquefies when placed on the skin but remains solid at ordinary temperatures.

The amount of hydroxystearic acid varies with the consistency desired and with the medicament. For example, in ointments containing considerable volatile oil, such as compound menthol ointment, more hydroxystearic acid is necessary.

The method of preparing the ointments consists of dissolving or incorporating the medicament with the liquid petrolatum and adding the molten 20% solution of hydroxystearic acid in liquid petrolatum. If the amount of the acid solution is small, the liquid petrolatum solution is also warmed. Upon cooling, a jellified product results; agitation is not necessary if the material is soluble in the liquid petrolatum. If

← PICTURE OF THE MONTH

From the coke ovens of steel mills engineers are recovering pyridine, formerly a bothersome impurity but now of value in the manufacture of sulfapyridine. New processes which provide for the continuous removal of this oven deposit permit a 95 percent recovery.

Photo by Charles Phelps Cushing.

the material is insoluble, as for example, zinc oxide, agitation is necessary while cooling to prevent separation of the solid. If desired, the medicament may be incorporated with the solidified jelly prepared by warming the liquid petrolatum and adding the acid solution to this. A stock jellified liquid petrolatum may be prepared and used in the same manner as white petrolatum. The following examples are chosen to illustrate pharmaceutical compatibility and are not chosen for therapeutic fitness.

Camphor Ointment: camphor 22 Gm., liquid petrolatum 72 Gm., 20% acid 6 Gm.
Capsicum Ointment: oleoresin of capsicum 5 Gm., petrolatum 85 Gm., 20% acid 10 Gm.
Compound Menthol Ointment: menthol 10 Gm., methyl salicylate 10 Gm., liquid petrolatum 65 Gm., 20% acid 15 Gm.
Ichthammol Ointment: ichthammol 10 Gm., liquid petrolatum 80 Gm., 20% acid 10 Gm.
Mustard Ointment: volatile oil of mustard 2 Gm., liquid petrolatum 88 Gm., 20% acid 10 Gm.
Phenol Ointment: phenol 2 Gm., liquid petrolatum 88 Gm., 20% acid 10 Gm.

The above ointments are, in the most part, materials which are more or less soluble in liquid petrolatum. The base is also satisfactory for substances which are insoluble as indicated by the following examples:

Ammoniated Mercury Ointment: ammoniated mercury 10 Gm., liquid petrolatum 80 Gm., 20% acid 10 Gm.
Boric Acid Ointment: boric acid 10 Gm., liquid petrolatum 70 Gm., 20% acid 20 Gm.
Sulfur Ointment: precipitated sulfur 15 Gm., liquid petrolatum 72.5 Gm., 20% acid 12.5 Gm.
Zinc Oxide Ointment: zinc oxide 20 Gm., liquid petrolatum 70 Gm., 20% acid 10 Gm.

Hydroxystearic acid is manufactured by the National Oil Products Company, Harrison, N. J. —JOUR. A. PH. A., *Sci. Ed.*, 29, No. 11 (1940)

CRANBERRY SYRUP VEHICLE

The cranberry, traditional adjunct to Thanksgiving and Christmas dinners, makes an efficient vehicle for chloral hydrate, potassium acetate and ammonium chloride, according to Lubitz, Fellers and Clague, of the Massachusetts Agricultural Experiment Station.

A syrup may be made by grinding 900 Gm. of cranberries to a medium fineness in a food chopper, allow to stand for one-half hour, strain through four layers of cheesecloth and filter through coarse filter paper. The yield is about 450 cc. of clear, sparkling juice. Bring this juice to a boil, remove from flame and add 850 Gm. of sucrose. When cool, remove surface scum. Final yield should be about 950 cc.

The syrup has a fine ruby color, a delicious flavor, and a mild, pleasant aroma. It is compatible with alcohol and retains its flavor, color and clarity for at least three months.

Tested for taste on nine individuals, it rated second to Syrup of Raspberry in palatability preference—ahead of Syrup of Orange, Cherry or Citric Acid. It ranked first as a vehicle for ammonium chloride; tied for first place with Syrup of Citric Acid as a vehicle for chloral hydrate; and tied for second place with Syrup of Citric Acid as a vehicle for potassium acetate.

Potassium acetate, sodium citrate and alkalies cause the syrup to change to a not unattractive light molasses color. Tin, iron, nickel, and copper utensils or containers cause darkening of the syrup.

Here is a new, inexpensive, easily prepared vehicle to place at the disposition of physicians. —JOUR. A. PH. A., *Sci. Ed.*, 29, No. 7 (1940), 325

CALAMINE EMULSION

If the dermatologists you serve are looking for a smooth calamine emulsion here is one that Dr. S. L. Hilton, of Washington, D. C., has developed at the request of specialists in his neighborhood:

Tragacanth	40 grains
Alcohol	2 drams
Calamine	1½ ounces
Olive Oil	1½ ounces
Water, *q. s.*	6 ounces

Add the alcohol to the tragacanth in a bowl under an electric malted milk mixer such as is described in "Here Is How We Do It" in this issue. Slowly add the olive oil, then one-half of the water, then the calamine, and then the balance of the water.

This makes a beautiful, smooth, creamy emulsion to be dispensed in a widemouth bottle.

DIET MAY BE IMPORTANT IN SULFANILAMIDE TREATMENT

The diet of persons being treated with sulfanilamide may have an important bearing on the effects of the drug, according to Drs. M. I. Smith, R. D. Lille, and E. F. Stohlman, of the U. S. Public Health Service and the National Institute of Health, whose work with rats was reported in *Science* for January 21st.

A low protein diet, such as one which in humans would include too little meat, eggs, and milk, increased the susceptibility of the rats to sulfanilamide, raising the concentration of the drug in the blood and increasing its toxic effects.

ALKALINE PEROXIDE EFFECTIVE IN IVY POISONING

A 3 to 5 percent solution of hydrogen peroxide in 70 percent alcohol, used in conjunction with an 0.5 percent solution of sodium hydroxide in 70 percent alcohol is effective in the treatment of *Rhus Toxicodendron* poisoning, according to Ole Gisvold, formerly assistant professor of Pharmaceutical Chemistry, College of Pharmacy, University of Minnesota, Minneapolis, now at the College of Pharmacy of Ohio State University, Columbus, O. The peroxide solution was prepared by diluting a 28 percent hydrogen peroxide solution.

Various adsorbents, precipitants, and oxidants including lead acetate, barium hydroxide, aluminum subacetate, aluminum acetate, magnesium acetate, ferric chloride, cupric acetate, aluminum oxide, magnesium oxide, prepared calamine, and alkaline peroxide were tested against a 70 percent alcoholic solution of physiologically-active phenols found in the milky exudate of the poison ivy leaves. Although many of these chemicals formed precipitates, adsorbates, and oxidants with the ivy phenols, these resultant products were active when rubbed on the skin, some just as active as the original ivy extract. The combination of the hydrogen peroxide solution and alcoholic solution of sodium hydroxide rendered the ivy phenols inactive.

Testing it on himself, Mr. Gisvold first sponged the effected areas with the alkali solution and then with the peroxide solution. After a few minutes the alkali was neutralized with a weak solution of acetic acid. One such treatment a day for two or three days appeared sufficient to destroy the ivy phenol and prevent it from spreading, if the lesions were not too deep-seated. Where the lesions were quite deep the treatment was somewhat painful, but the pain was of short duration.

—JOUR. A. PH. A., *Sci. Ed.*, 30, No. 17 (1941)

NEW EDITOR OF PRACTICAL EDITION

On January 1st Robert William Rodman assumed the full-time editorship of the Practical Pharmacy Edition of the JOURNAL OF THE AMERICAN PHARMACEUTICAL ASSOCIATION. This is the first issue published under his direction. Mr. Rodman was graduated by the Rutgers University College of Pharmacy, Newark, N. J., in 1928 and has had several years of practical drug store experience. He was a member of the editorial staff of *Druggists Circular* for the past eleven and a half years, occupying the position of managing editor at the time of its change of ownership last November. For several years he has been chairman of the ASSOCIATION'S Press Relations Committee and last June he was elected to the Pharmaceutical Recipe Book Committee.

ROBERT W. RODMAN

NEW PRESCRIPTION SPECIALTIES

ORAL MALE HORMONE

Three manufacturers have announced the introduction of methyl testosterone, $C_{20}H_{30}O_2$, an orally-effective form of the synthetic male sex hormone. It is $^1/_8$ to $^1/_6$ as effective as is testosterone propionate by injection and consequently, 3 to 5 times as much, by weight, must be given to produce the same effect.

The oral male sex hormone is used in the treatment of impotence due to androgenic deficiency; of hypogonadism in doses of 5 to 10 tablets daily; and in the male climateric in doses of 2 to 5 tablets daily. In the female it is used in the suppression of lactation.

The new oral form is available under the following trademarked names:

METANDREN, boxes of fifteen 10 mg. scored tablets, costing $4.00 a box; bottles of thirty tablets, costing $7.20 a bottle; and bottles of one hundred tablets, costing $21.10 a bottle. *Ciba Pharmaceutical Products, Inc., Summit, N. J.*

NEO-HOMBREOL-M, boxes of fifteen 10 mg. tablets, costing $4.00 a box, and boxes of 30 tablets costing $7.20 a box. *Roche-Organon, Inc., Nutley, N. J.*

ORETON-M, boxes of fifteen 10 mg. tablets, costing $4.00 a box, boxes of 30 tablets costing $7.20 a package; and boxes of 100 tablets costing $21.10 a package. *Schering Corp., Bloomfield, N. J.*

SUPER A VITAMIN CONCENTRATE

Satisfactorily meets the demand for a potent vitamin A preparation for treating borderline states of vitamin A deficiency such as night blindness and hyperkeratosis of the skin and also to supplement diets low or deficient in vitamin A.

Super A Vitamin Concentrate, derived from fish liver oils, contains approximately 25,000 U. S. P. units of vitamin A and 300 U. S. P. units of vitamin D per capsule. One or more may be given daily depending upon the condition.

They are offered in bottles of 100 capsules which cost the pharmacist $1.75 per bottle.

The Upjohn Company, Kalamazoo, Mich.

TOFAXIN

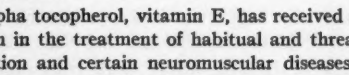
Alpha tocopherol, vitamin E, has received recognition in the treatment of habitual and threatened abortion and certain neuromuscular diseases, particularly amyotrophic lateral sclerosis and muscular dystrophy.

Tofaxin is a stable, biologically assayed distillate of vegetable oils, containing alpha, beta, and gamma tocopherols. Each 50 mg. capsule is the equivalent of 30 mg. of alpha tocopherol.

In habitual abortion, one or two capsules are given daily throughout pregnancy; in threatened abortion, up to five capsules daily; in neuromuscular diseases, from two to five capsules daily.

Tofaxin is offered in bottles of 50 capsules which cost the pharmacist $3.44 per bottle.

Winthrop Chemical Company, New York, N. Y.



NALUTRON

The corpus luteum hormone or progesterone is a most important factor in the second half of the menstrual cycle. After rupture of the follicle and ovulation this hormone maintains favorable conditions in the uterus for the reception of the ovum in the event of fertilization. This consists of glandular and cellular changes which favor nidation. If conception does not occur, the corpus luteum degenerates and menstruation takes place. Should fertilization of the ovum occur the corpus luteum continues to elaborate its hormone until this function is taken over later by the placenta. If the corpus luteum degenerates prematurely, however, uterine contractions begin, bleeding occurs and abortion threatens.

Nalutron (Brand of PROGESTERONE) is a pure synthetic corpus luteum hormone, identical with the natural hormone in its biologic and chemical properties.

It is used in the treatment of habitual and threatened abortion, dysmenorrhea, menorrhagia and metrorrhagia, pre-eclamptic toxemia, sterility due to insufficient endometrial development, and in premenstrual tension.

Nalutron is supplied in boxes of five 1 cc. ampules containing 1 mg., 2 mg., or 5 mg. in oil, costing the pharmacist $2.75; $4.75; and $8.25 per box, respectively.

Winthrop Chemical Company, New York, N. Y.

TRICHOPHYTON 'U F A'

(UNDENATURED FUNGUS ANTIGEN, LILLY)

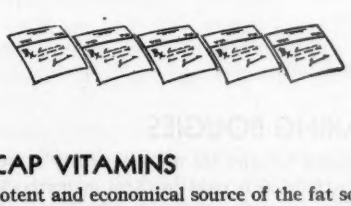
Fungus infection, such as "athlete's foot," is extremely prevalent; highly infective; very resistant to treatment; and, in addition, patients may develop a cutaneous sensitization (allergy) to the fungus. The secondary allergic lesions (ids) appear elsewhere on the skin, usually on the hands or arms.

Trichophyton 'U F A' is an undenatured antigen (trichophytin) prepared from mass cultures of *Trichophyton interdigitale*, the fungus that most often causes "athlete's foot;" it is intended for use both for the diagnosis of fungus infection and for treatment of the allergic manifestations. For diagnostic purposes, 0.1 cc. of a 1:5 dilution is injected intracutaneously on the anterior surface of the forearm, and the reaction (formation of a wheal) noted in twenty-four to forty-eight hours. After positive diagnosis, the product may be used as a therapeutic measured in gradually increasing strengths, beginning with 0.1 cc. of a 1:100,000 dilution. Reports thus far have indicated 70 percent relief of symptoms and 20 percent improvement in cases in which it has been used. Some patients are benefited after three or four injections; others require more injections.

Trichophyton 'U F A' in a jelly base is available for local desensitization and immunization.

Trichophyton 'U F A-70 is offered in concentrated form in 5-cc. vials, which cost the pharmacist 90 cents. Trichophyton 'U F A' in a jelly base ('U F A'-75) is offered in half-ounce tubes, which cost the pharmacist $6.00 a dozen.

Eli Lilly and Company, Indianapolis, Ind.



UNICAP VITAMINS

A potent and economical source of the fat soluble vitamins, the vitamins of the B complex and vitamin C in one convenient dosage form that greatly simplifies daily vitamin supplementation.

Unicap Vitamins contain, in each capsule: vitamin A, 10,000 U. S. P. units; vitamin B_1, 500 International Units; vitamin B_2, 200 gamma; vitamin B_6, 200 gamma; vitamin C, 500 International Units; vitamin D, 1000 U. S. P. Units, and nicotinamide, 20 milligrams. One capsule per day is the usual dosage.

Unicap Vitamins are offered in packages of 24 tablets costing $1.25 per package; and bottles of 100 tablets costing $3.88 a bottle.

The Upjohn Company, Kalamazoo, Mich.

ANAESTHESIN JELLY

The introduction into the urethral passage of the male of such instruments as catheters, sounds, urethroscopes, and cystoscopes is painful unless some form of topical anaesthesia is used.

Anaesthesin Jelly is intended for this purpose. It contains 10 percent of Anaesthesin (ethyl aminobenzoate) in a bland water-soluble, glycerin-tragacanth base of high lubricating quality. Anaesthesin is non-irritating and is slowly soluble in tissue fluids; thereby providing prolonged anesthetic action and virtual freedom from toxic effects.

Each tube is packed with a sterilizable metal urethral tip which permits the instillation of a small amount (never more than 2 drachms) of the jelly into the forepart of the urethra from whence it is forced into the posterior urethra by gentle massage. Anesthesia is usually adequate for painless instrumentation in five minutes.

Anaesthesin Jelly is supplied in boxes of three $1^1/_2$ oz. collapsible tubes with detachable urethral applicator, costing the pharmacist $1.25 per box.

Winthrop Chemical Company, New York, N. Y.

FLAVAXIN

Flavaxin is a synthetic riboflavin, vitamin B_2.

It occurs in the form of orange-yellow crystals, difficulty soluble in water, insoluble in oils and fats, soluble in acid and neutral solutions but *destroyed in alkaline solutions*. It is biologically standardized, each milligram representing 400 Bourquin-Sherman units.

It is used in the prevention and treatment of vitamin B_2 deficiency (ariboflavinosis) characterized by cheilosis, seborrheic skin lesions and various eye manifestations. It is also employed in conjunction with nicotinic acid and vitamin B_1 in the treatment of pellagra. The average adult daily requirement of riboflavin is from 2 to 3 mg., slightly increased during pregnancy and lactation; for children up to 10 years of age, 1 mg.; average therapeutic dose, 1 to 5 mg.

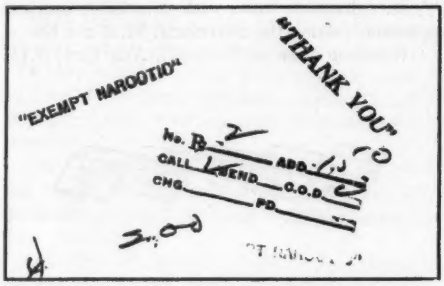
Flavaxin is supplied in crystal form in 20 mg. vials which cost $0.38, and 100 mg. vials costing $1.00; ampoules of 1 mg. dissolved in 2 cc. of propylene glycol and distilled water, boxes of 5 costing $1.25; and in bottles of twenty-five 1 mg. tablets which cost $0.50 per bottle; also bottles of twenty-five 5 mg. tablets which cost $1.88.

Winthrop Chemical Company, New York, N. Y.

Here's how we do it!

ONE MAN "PLUS" STORE

William C. Goss, of East Orange, N. J., has an interesting solution to the problem of the one man "plus" store that doesn't fill quite enough prescriptions to keep two men busy yet fills almost too many for one man to handle alone.



He has worked out a system that makes use of the services of his woman bookkeeper. When he takes a prescription in he stamps it on the back with a rubber stamp that has spaces in which he records the number of prescriptions received from the customer, the amount of any additional charge for merchandise ordered by the customer to be called for or delivered with the prescription, whether the order is to be called for or delivered and whether it is C. O. D., charged, or paid. He also marks the price to be charged for the prescription and notes, by number, the style of label to be used for the prescription. Another stamp is used if the product contains an exempt narcotic and still another is used if it is for a new customer for which the physician should receive a "Thank you" note.

This all takes but a minute and Mr. Goss then passes the prescription to his bookkeeper through an opening in the partition which separates the office where she works and the prescription room. She types the prescription label and the delivery label and hands them back to Mr. Goss who, in the meantime, has been filling other prescriptions. He fills in the prescription number and date and checks the directions when he fills the prescription. The bookkeeper takes care of the charges, records the exempt narcotics used, and sends out the "Thank you" notes on the following morning.

Thus Mr. Goss spends his time filling prescriptions, not in using the typewriter, and he has reduced the system to a marvel of efficiency.

CLEANING GREASY MORTARS

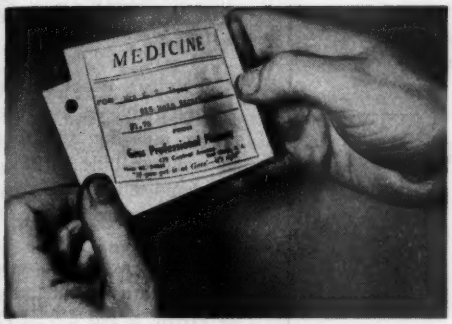
How do you remove the grease from the mortar and pestle after you have prepared an ointment?

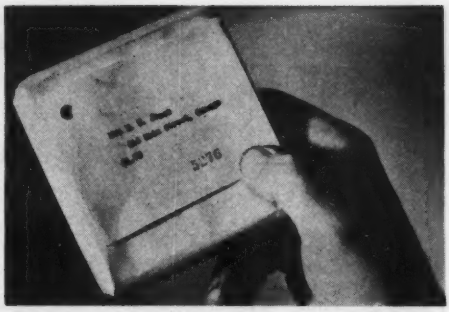
Sawdust works wonders. Keep it near the sink in a tin container made from a castor oil can. Plunge the mortar and pestle in the box and clean them with a handful of sawdust, then wash as usual.

MAKING BOUGIES

Because bougies are not frequently prescribed, little attention is paid to them in textbooks and magazine articles. Here is an easy method of preparing them. Try it next time you have a prescription.

Make the mass as usual but instead of chilling it and then rolling the bougies out by hand, place the mass in an ointment tube. Leave the cap on and roll up the end of the tube to pack the mass tightly. Then take off the cap and with a firm, even motion, squeeze out the bougies to the proper length, cut them, and then chill them. With this method you get a far superior, more-uniform product than you do if you roll them by hand.





DELIVERY LABEL RECORD

Here is a unique delivery label-record system used by William C. Goss, of East Orange, N. J.

The label is double and scored down the fold on the right-hand edge. It is $3^3/_4''$ x $2^3/_4''$ folded. With carbon paper inserted, the label is typed with the customer's name and address, the price, and whether it is to be charged or paid for.

The fold is reversed and the printed section pasted to the package.

When the delivery is made, at the counter or at the home, the carbon copy half is torn off, returned to the prescription room and filed for a record of the consummation of the transaction.

A REFILL REFERENCE

Do you shudder when a customer comes in and says, "Will you refill that prescription I had for nose drops last winter? I threw the bottle away by mistake but I thought you could probably find it."

You can save yourself a lot of time and annoyance if you keep an up-to-date cross reference book of refills. Buy a record book with alphabetical pages and list refills by the patient's name. When Mrs. Brown wants a precription refilled and she has lost the bottle, you merely turn to the "B" pages and read "Brown, Mrs. W. C., 1/10/39, 1164; 6/5/39, 8764; 6/15/40, 17014." No more checking your files prescription by prescription.

If you have a bookkeeper, let her enter the day's prescriptions the following morning. If you have an apprentice or a registered man, assign the task to him in his spare time. If you have neither, keep the records yourself but don't let them get behind.

NARCOTIC RECORD

How do you keep your records of narcotics dispensed on prescription?

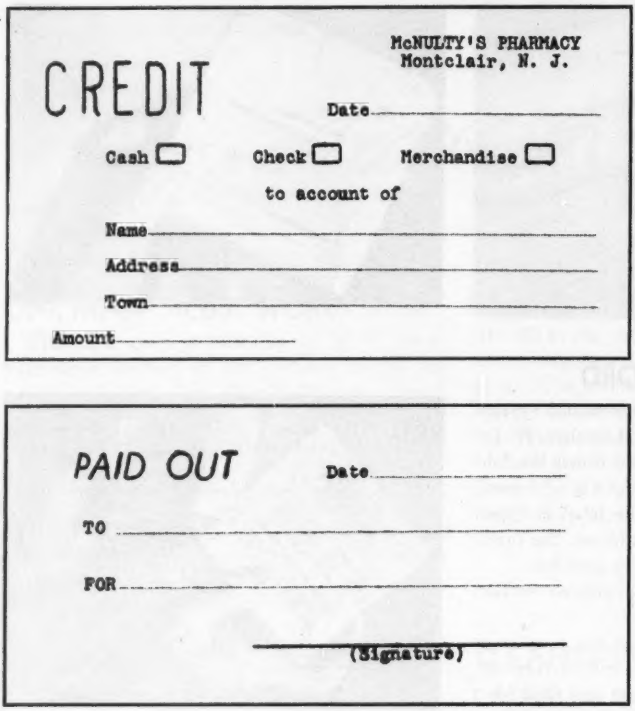
Why not type them on the back of your copy of narcotic purchase invoices? When you bind the invoices you have a complete record, in one place, of receipts and disbursements of narcotics.

BIOLOGICAL REMINDER

Don't trust the delivery boy's memory to tell the customer to keep his biological product prescription in the refrigerator. A simple sticker

BIOLOGICAL PRODUCT
REFRIGERATE IMMEDIATELY

$1''$ x $3^3/_4''$ such as that shown will do the trick and represents a "fine point" in prescription packaging service.



McNULTY'S PHARMACY
Montclair, N. J.

CREDIT

Date _____

Cash ☐ Check ☐ Merchandise ☐

to account of

Name _____

Address _____

Town _____

Amount _____

PAID OUT Date _____

TO _____

FOR _____

_____
(Signature)

BOOKKEEPING AIDS

McNulty's Pharmacy, of Montclair, N. J., uses two simple aids for recording payments of bills, returned merchandise for credit, and expenditures from the cash register.

When a customer pays a bill or returns merchandise for credit, a red CREDIT slip, 6″ x 3¼″ is filled out with the date, customer's name and address, amount involved, and particulars of cash, check, or merchandise return.

When money from the cash drawer is used to pay for a purchase a pink PAID OUT slip 6″ x 2¾″ is filled out with the date, name of person to whom the money is paid, and the amount. The person receiving the money signs the slip.

AN UNUSUAL DISPLAY

An individualized prescription display made with a series of six discs, 18 to 24 inches in diameter, was described by Charles Ely, of the College of Pharmacy of the Detroit Institute of Technology, before the Section on Pharmaceutical Economics of THE AMERICAN PHARMACEUTICAL ASSOCIATION in Richmond, last May.

The discs are sawed from a sheet of Celotex, shellaced, and given a coat of white or canary-yellow, non-gloss paint. Each disc is suspended from the ceiling of the window by either ribbon or thread. The first disc is placed in the front center of the window about a foot from the floor slanting slightly toward the window. A disc is suspended on either side of the center disc, slanting a bit more, and about 15 inches from the floor. A disc is suspended from each rear corner of the window at a 45-degree angle to the passer-by. The sixth disc is suspended in the rear center, perpendicularly. A Birdeye spotlight is trained on each disc.

On Disc No. 1, place a medical book with a caption pertaining to knowledge. On disc No. 2, place a doctor's prescription with a caption, "The Master Plan" or the "Blue Print." On disc No. 3, place some utensils and ingredients of the prescription with a placard "Science and accuracy are *important* here." On disc No. 4, place the completed prescription with a placard "Ready to fulfill its very important mission." On disc No. 5, dramatize the results, by using the picture of a baby, child, or adult in perfect health and happiness. On disc No. 6 use the general message of the display, such as "For Health's Sake."

The basic idea of this display can be adapted to a number of specialized windows in which the pharmacist wishes to tell a story. The different placement of discs enable him to give a definite sequence or continuity to the facts presented and, in so doing, "put over" a message effectively.

DELIVERY BOY RECORD

Daily record sheets for delivery boys help eliminate errors. Here is the slip developed by William McNulty, of Montclair, N. J. The boy records the C. O. D. deliveries which he collected and those on which he did not collect, as well as any money he paid out for gas, oil, or other expenses. Space is provided at the bottom for end-of-the-day computations. The slips are $3^1/_2$" x $6^1/_4$" and are mimeographed.

Driver	Date	
C.O.D.	C.O.D. (not collected) (list names & amount)	Paid Out (list items)
	TOTAL	TOTAL
	Amount Collected	
	Change Received	
	TOTAL	
	Amount Paid Out	
	TOTAL	
	Cash (turned in)	
TOTAL	Over	Short

MIXER EMULSIFIER

For making small amounts of emulsions, up to one pint, on old malted milk mixer with a few improvements is an excellent bit of equipment.

Dr. S. L. Hilton, of Washington, wouldn't be without his. He made a new steel collar to hold the motor housing about an inch farther away from the shaft than it had been, made an oversize slotted disk for the bottom of the stirring rod, and replaced the mixing cup with an egg bowl. You must use a rheostat on the wire to keep the mixer from going too fast and spilling the emulsion, and you should put a piece of rubber mat under the bowl to hold it still.

The mixer is more convenient than a homogenizer for small quantities of an emulsion.

EASY CONVERSION

Petty's Pharmacy, of Newark, N. J., has an interesting conversion method for physicians.

"When it is desired to write for 15 capsules, think of the dose of each ingredient in grains, and write that amount as grams," says Petty's. "This total dose, when divided into fifteen capsules, will yield the desired number of grains per capsule—3 Gm. of a drug divided into fifteen capsules gives a dose of 3 grains per capsule."

PRESCRIPTION CLIPS

Ordinary wooden clips, such as are used to hang clothes, make excellent devices to classify prescriptions as to *waiting, deliver, charge, C. O. D., or paid.* The appropriate legend can be printed on the clip with pen and india ink, and, if desired, the clips can be painted in distinctive colors. The right clip, affixed to a prescription, prevents errors and is particularly useful if more than one man handles the compounding and dispensing.

Evans OF WARRENTON

YOU HAVE SEEN OR HEARD OR READ OF CHARLES HALL EVANS, PRESIDENT OF THE AMERICAN PHARMACEUTICAL ASSOCIATION. HERE IS THE STORY OF THE PHARMACIES WHERE HE PRACTICES THE PROFESSION WHICH HE HEADS

"YOU can get it at Evans" is a by-word in Warrenton, Georgia, where Charles Hall Evans, president of the American Pharmaceutical Association, conducts two of the best stocked small-town pharmacies in the Piedmont section of the state. You never hear, "Sorry, we're just out of that," or "We will have some in tomorrow," for Evans Pharmacies have built their reputation on their ability to supply pharmaceutical products when they are needed, not a day later.

The Evans Pharmacies are an inspiring example of how important the small-town pharmacist can make himself to his community if he has initiative, ability and personality. Warrenton has a population of but 1286 inhabitants. It is the county seat of Warren County which, in all, has a population of only 10,717, seventy per cent of whom are colored. Cotton, corn, poultry and livestock furnish their income.

The prescription departments of both stores are models for completeness of stock and impressive appearance. Both are of the semi-visible type and are spotlessly clean and neat. They are the heart of both stores around which other departments have been developed. Mr. Evans has maintained a close contact with physicians in the community and it has been an association of equals. Pharmacy and medicine are on the same plane in Warrenton.

And many "big city" pharmacists could learn a lesson from Mr. Evans' practical use of these contacts with physicians. For example, he says, "By close contact with doctors the newer preparations are stocked and we receive their coöperation

Left: Charles H. Evans, Jr., President Evans, and A. K. Carr in the visible prescription department of Number One of the Evans Pharmacies

in keeping our stocks balanced. We experience no trouble in the duplication of stock of such items as Elixir of Thiamin Chloride because we merely get in touch with our physician friends, find out which brands they prefer, and stock those. We work shoulder-to-shoulder in the common task of preventing and relieving disease and suffering in our community. Our problems and their problems affect the manner in which we are able to render our joint services, so we work them out together."

Evans Pharmacies, like other small-town pharmacies throughout the country, furnish many services not demanded of stores in larger communities. In addition to a complete toiletry department, tobacco department, stationery and school supplies department, first aid and sick room supplies section, baby department, and soda fountain, they have a florist agency, and a veterinary supplies department. In this latter section such items as castor oil, turpentine, oil of tar, benzol, denatured alcohol, sulfur, alum, sal soda, saltpetre, bluestone, copperas, rotonone, and calcium arsenate are bought in barrel lots. Mr. H. W. Harper, of Mr. Evans' staff, has studied diseases of farm animals and, since there is no veterinarian in the county, he finds plenty of use for his services and both pharmacies enjoy a large volume of sales in this department.

At a recent "open house," Mr. Evans distributed the following statement to his customers:

"The present owner of Evans pharmacies graduated from Mercer University and passed the state board of pharmacy exactly 24 years ago. Since that time many, many changes have taken place in pharmacy and medicine. That we have rendered faithful service and have kept abreast with the changing times has been evidenced by the honors both state and national that have come to us. In this country Evans Pharmacies and Warrenton, Georgia, are known by all men in pharmaceutical circles.

"The success that has come to us has been made possible through your loyalty and confidence and we wish to tell you how deeply grateful we are to you. We pledge you our best efforts in continuing our business on the same high plane in the future. It is our desire to give to Warrenton and Warren County fresh, pure drugs, and the most efficient service at the lowest prices in keeping with quality. We continue our pledge never to substitute nor to use anything but the best in drugs, chemicals or, pharmaceuticals."

A SUBSIDIARY

An interesting tale of sidelines is Mr. Evans purchase of an Orthophonic Victrola for his own use back in 1928. The day it arrived at the store he opened it and so many people admired it and asked him to order one for them that the Victrola never did get home. Instead it led to the founding of a new, separate business known as Charles Evans Stores, which sells refrigerators, ranges, radios and electrical appliances.

Both stores have soda fountains of the latest design. No cooked lunches are served but the fountains have two specials: Home-Made Chicken Salad and Ham Sandwiches. Mrs.

PRESIDENT CHARLES HALL EVANS

Evans prepares both in the Evans' home. The chicken salad is prepared from an old southern recipe and is acclaimed as the "world's best." The hams for the sandwiches are cooked in large glassine bags with Coca Cola syrup and spices in a special recipe of Mrs. Evans. Salted pecans from the Evans' grove are toasted in butter daily by Mrs. Evans for the store.

Mr. Evans was born in Norwood, Ga., and moved to Warrenton at an early age. His father was engaged in the drug business minus a prescription department. After graduating with the Ph.G. degree from Mercer University, Macon, Ga., in 1915 he entered into partnership with his father and took over the business upon the latter's death in 1926. He married Miss Sarah Lang, of Sandersville, Ga., in 1917 and their only son, Charles, Jr., is now a senior at the University of Georgia School of Pharmacy.

Mr. Evans served for many years on the local Board of Education and on the official board of the Methodist Church. He has always been active in his State Pharamceutical Association and he served on the Georgia Board of Pharmacy for five years. He was elected president of the National Association of Boards of Pharmacy in 1935 and served on the Executive Committee of that organization from 1936 to 1938.

"I am happy I chose pharmacy as my profession," says Mr. Evans. "I am doubly glad that my son has chosen pharmacy as his career. I am happy that I have conducted my little business as I have during the past twenty-five years . . . stressing its professional services and building other departments around the prescription department in a way that has helped rather than hindered its growth."

Below: A. K. Carr, Charles H. Evans, Jr., President Evans, and R. Lin Fulghum, in Number Two of the Evans Pharmacies.

BRANCH MEETINGS

ALABAMA POLYTECHNIC STUDENT BRANCH.—George Bayne, pharmacist of Auburn, Ala., addressed the October meeting of the branch, giving a most interesting résumé of his years as pharmacist and salesman. Thomas Schueseller has been appointed chairman of a committee to design a key for members of the branch.

The first meeting in November was addressed by Colonel John Waterman who explained the place of the Field Artillery in the Army. A number of pharmacy students are in the Field Artillery branch of the R. O. T. C.

The branch held a Christmas party at the home of Beth M. Murphy, secretary of the branch.

CITY OF WASHINGTON.—Dr. Robert L. Swain, editor of *Drug Topics*, addressed the December 11th meeting, discussing the cost of distribution of medicinals, the work of the Drug Resources Board, the conscription of pharmacists, hospital insurance and legislative problems.

Dean Paul Briggs, of George Washington School of Pharmacy, reported that a committee of the branch would meet at luncheon with like committees representing the local medical and dental societies to discuss mutual problems.

NORTHERN NEW JERSEY.—Dr. Richard A. Deno, president of the branch, addressed the December 9th meeting on the subject of recent developments in medical and pharmaceutical research. The branch held a dental-pharmacy symposium in January.

NEW YORK.—Col. Allen W. Dawson, M.C., addressed the January 13th meeting on the subject of "The Drug and Pharmaceutical Industry and Its Position in National Preparedness" and Dr. William De Kleine, Medical Director of the American Red Cross, addressed the members on "The Drug and Pharmaceutical Industry's Coöperation with the American Red Cross in National Emergencies." Dr. De Kleine revealed that up to the present time, 745 pharmacists have enrolled as medical technologists with the Red Cross. He suggested that the Branch associate itself with the local chapter of the American Red Cross through a committee in order that in the event of a national disaster or emergency the pharmacists of the locality would be in a position to give the most efficient aid possible.

The branch elected the following new officers: Leonard W. Steiger, *president;* Horace T. F. Givens, *vice-president;* Frank J. Pokorny, *secretary;* Turner F. Currens, *treasurer;* Robert S. Lehman, *chairman of the Committee on Education and Legislation;* Otto F. A. Canis, *chairman of the Committee on Audit;* James H. Kidder, *chairman of the Committee on Professional Relations;* and Cosmo Ligorio, *chairman of the Committee on the Progress of Pharmacy.*

PHILADELPHIA.—Dr. Frank Eby, Professor of Botany and Pharmacognosy at the College of Pharmacy of Temple University, addressed the January 14th meeting on the subject of the present crude drug situation. Dr. Eby explained that the country is much better off to-day than it was at the time of the last war because of the greater knowledge of the cultivation of drugs in this country, a broader home source and the availability of better chemotherapeutic agents.

He stated that hydrastis, peppermint, wormseed and other plants were being grown profitably in this country; 250–300 native drugs are produced in varying amounts. Most are cultivated in North Carolina. Cascara is produced in large quantities in Oregon and Washington. Several wild plants are harvested in the northeast. He mentioned that the climatic and soil conditions are suitable for growth of such drugs as digitalis and belladonna. Cultivation of these has practically ceased, as it has been found profitable only when prices are abnormally high. Healthy, normal looking plants will occasionally be found to be lacking in therapeutic activity or odor value because of some unknown reason. The Department of Agriculture and state universities, such as Florida and Wisconsin, have succeeded in growing many drugs. The Government recommends that individuals should not embark on commercial production of drugs before making a thorough study of soil, cultivation methods and market conditions.

A color film of the collection of drugs in North Carolina, hydrastis farming in the Skagit Valley and drug processing was shown through the courtesy of the S. B. Penick Company.

A resolution of tribute to the memory of the late Richard H. Lackey was approved and spread upon the minutes.

SOUTHERN COLLEGE OF PHARMACY STUDENT BRANCH.—Dr. J. Sam Guy, head of the Chemistry Department of Emory University, addressed the January 21st meeting on the subject of the "Role of Science in National Defense." Dr. Guy pictured the horrors of the present war as "science on the rampage" and he outlined the regret with which men of science see their developments used to harm instead of help civilization. He expressed the opinion that the day is not far off when the way of life of a nation must rise or fall by the achievements of its scientists and he urged that the nation's scientific power be fully utilized in the defense of the country.

WESTERN NEW YORK.—Harold Green, of L. Sonneborn and Sons, addressed the January 9th meeting on the subject of "Petroleum Products in Pharmacy." Mr. Green pointed out that there are nearly five hundred different uses for petroleum and expressed the opinion that the domestic white oils are as fine as imported oils.

George W. Fiero, secretary of the branch reported on the success of the appeal for pharmaceuticals to aid Britain and Greece. During Christmas vacation, the appeal was enlarged to include cities of Western New York where pharmacy students returned home for the holidays. The first shipment from the Buffalo area consisted of thirty cartons of pharmaceuticals and first aid materials, consisting of over 350 different items. An equally large quantity is on hand from Rochester, Syracuse and other cities, with supplies coming in daily. The valuable assistance of pharmacy students in this drive cannot be over emphasized.

STATE COLLEGE OF WASHINGTON STUDENT BRANCH.—Claud Edgren, proprietor of the Elk Drug Store, of Colfax, addressed the January 15th meeting on the subject of qualities the employer expects to find in his employees. His talk was most constructive and inspirational.

OBITUARY

HOWELL W. ALLEN

Howell W. Allen, pharmacist of Baltimore, Md., died on December 26th at the age of 74 years.

Mr. Allen had been engaged in pharmacy since 1899 and was a graduate of the Maryland College of Pharmacy. He had served as President of the Maryland Pharmaceutical Association and was a member of the AMERICAN PHARMACEUTICAL ASSOCIATION, the National Association of Retail Druggists, the Baltimore Retail Druggists Association, the Alumni Association of the School of Pharmacy of the University of Maryland and the Wedgwood Club.

FRANK H. FREERICKS

Frank H. Freericks, Secretary and Counsel of the American Druggists Fire Insurance Company, Cincinnati, Ohio, died January 24th following a two weeks illness of pneumonia, He was 69 years of age.

Mr. Freericks was born in Germany and came to the United States at the age of eight years. He began to work in a drug store while still a boy and in time became its manager, owner and ultimately the owner of several drug stores. He studied law at the Cincinnati Law School and was graduated in 1901. He was a charter member of the National Association of Retail Druggists and had been a member of the AMERICAN PHARMACEUTICAL ASSOCIATION since 1905. He helped organize the American Druggists Fire Insurance Company 33 years ago to specialize in fire insurance for drug stores. He founded the Cincinnati City Plan Association.

CHARLES JOSEPH FUHRMANN

Charles J. Fuhrmann, former Acting Dean of the College of Pharmacy of Howard University, Washington, D. C., died suddenly on January 2nd. He was 69 years of age.

Dean Fuhrmann came to Washington as a young man, was graduated by the National College of Pharmacy in 1901, and the same year opened a drug store which he conducted until he accepted the position of Professor of Pharmacy at Howard in 1922. He served as Vice Dean of the College from 1926 to 1937 when he retired and was appointed Acting Dean for the year 1937–1938 until a new administrator could be appointed.

He served for ten years on the District of Columbia Board of Pharmacy, twelve years as secretary of the District of Columbia Pharmaceutical Association and was a charter member of the Veteran Druggists' Association. He was a member of the AMERICAN PHARMACEUTICAL ASSOCIATION and an honorary member of the National Association of Boards of Pharmacy.

JOHN WILLIAM GAYLE

John W. Gayle of Frankfort, Ky., treasurer of the National Association of Boards of Pharmacy and, until his retirement two years ago, secretary of the Kentucky Pharmaceutical Association for fifty years and secretary of the Kentucky Board of Pharmacy for thirty-seven years, died January 7th. He was 81 years of age.

Mr. Gayle was Honorary President of the AMERICAN PHARMACEUTICAL ASSOCIATION in 1939.

He first worked in a pharmacy in 1882, became registered by examination in 1884, and at one time

operated three pharmacies in Frankfort. At the time of his death he still held an interest in two pharmacies.

Mr. Gayle was chairman of the Legislative Committee of the Kentucky Association for twenty-seven years during which time he secured the passage of the State Pharmacy Law and other legislation in the interest of better pharmaceutical service to the public.

He became a member of the AMERICAN PHARMACEUTICAL ASSOCIATION in 1891.

WILLIAM PARKER HERBST

William P. Herbst, retail pharmacist of Washington, D. C., died December 18th. He was 72 years of age.

Mr. Herbst began to work in a pharmacy as a youth of eighteen, was graduated by the National College of Pharmacy in 1889, purchased the pharmacy of W. T. Baldus, 19th and Pennsylvania Ave., and established his own business in 1890. He retired in 1931. He was a member of the Board of Trade, District of Columbia Pharmaceutical Association and Veteran Druggists' Association, the AMERICAN PHARMACEUTICAL ASSOCIATION, National Association of Retail Druggists and the Maryland Pharmaceutical Association. He was a member of the Board of Directors of the Washington Wholesale Drug Exchange.

RICHARD H. LACKEY

Richard H. Lackey, retail pharmacist of Philadelphia, Pa., for the past fifty-two years, died on November 4th.

Mr. Lackey was a member of the Philadelphia Association of Retail Druggists, the Veterans' Association, a past-president of the Pennsylvania Pharmaceutical Association, a trustee of the Philadelphia College of Pharmacy and Science, one of the oldest members of the Philadelphia Wholesale Drug Company, and the National Association of Retail Druggists, and had been a member of the AMERICAN PHARMACEUTICAL ASSOCIATION since 1911. Dean Ivor Griffith, as well as many other prominent pharmacists, served as apprentice to him.

PAUL NICHOLAS LEECH

Paul Nicholas Leech, Ph.D., Director of the Division of Foods, Drugs and Physical Therapy and Secretary of the Council on Pharmacy and Chemistry, of the American Medical Association, died suddenly on January 14th, following a hemorrhage of the brain. Dr. Leech was born in Oxford, Ohio; obtained his A.B. degree from Miami University, Oxford, Ohio; received the degrees of M.S. and Ph.D. from the University of Chicago; and received the honorary degree of Master of Pharmacy from the Philadelphia College of Pharmacy and Science.

CHARLES MORGAN

Charles Morgan, of Morgan and Millard, pharmacists, of Baltimore, Md., died on December 11th, at the age of 84 years.

He started work in a pharmacy at the age of thirteen years, later attending the Maryland College of Pharmacy. In 1895 he opened his own pharmacy which was destroyed in the Baltimore Fire. He then established the firm of Morgan and Millard with David R. Millard.

Mr. Morgan served as president of the Maryland Pharmaceutical Association in 1910. He was a member of the AMERICAN PHARMACEUTICAL ASSOCIATION, the Baltimore Veteran Druggists Association, the Alumni Association of the School of Pharmacy of the University of Maryland and a director of the Calvert Drug Company.

HARRY ROBERT RUDY

Harry R. Rudy, retail pharmacist of Hagerstown, Md., and member of the Maryland State Board of Pharmacy, died on January 5th.

Mr. Rudy first started to work in a pharmacy in 1890 at the age of seventeen years. He was graduated by the Philadelphia College of Pharmacy and Science in 1896 and returned to Hagerstown and formed a partnership with H. Lionel Meredith for the conduct of a pharmacy under the name of Rudy and Meredith. In 1923 Mr. Rudy assumed full ownership of the pharmacy.

Mr. Rudy served as president of the Maryland Pharmaceutical Association in 1927 and had been a member of the AMERICAN PHARMACEUTICAL ASSOCIATION for many years. He took part in civic affairs and had been president of the Park Board of Hagerstown since 1918.

IN THE NEWS

Studies of quinine production at the Puerto Rico Experiment Station have developed to the point where mature trees have been produced and samples of bark are being harvested and assayed, James T. Jardine, Chief of the Office of Experiment Stations, has reported to Secretary of Agriculture, H. A. Wallace.

Bark from trees of Cinchona ledgeriana has been found to contain 8.5 percent of quinine as the sulfate and 10 percent of total alkaloids. These are good commercial concentrations. The development of knowledge of quinine production was handicapped considerably because much of the accumulated knowledge from experience or experimentation in the production of this crop in the East Indies had not been made public.

Many species of Cinchona, particularly those with high quinine concentrations, are propagated with considerable difficulty, being subject to fungus diseases and at least one insect pest and being highly selective as regards soils and atmospheric environment. At the station the germination of Cinchona seeds has now been developed and standardized to a point where considerable certainty is possible in obtaining good nursery trees. The expansion of the forest plantings in Puerto Rico is now possible, and aid is being given to other Western Hemisphere countries in the establishment of this crop, he reported.

Five year old cinchona tree in the Maricao Insular Forest where the U. S. Department of Agriculture is investigating the possible development of a nearby source of supply of quinine.

A Permanent Health Museum, is being planned in Flushing Meadow Park, Long Island, N. Y., which will emerge next summer on the former site of the New York World's Fair. The Masterpieces of Art Building from the Fair will be renovated to house the museum in which will be installed many of the exhibits that were in the Medicine and Public Health Building and a number of new exhibits. The Museum is sponsored by a group of physicians including Drs. Louis I. Dublin, John L. Rice, George Baehr, Malcolm Goodridge, Victor Heiser, David J. Kaliski, Seth N. Milliken, and George E. Vincent.

The Plant Science Seminar will be held at Cranbrook Institute of Science during the week of August 11–15, 1941. Cranbrook is an educational center occupying 300 acres of wooded land in Bloomfield Hills, Michigan, about twenty miles north of Detroit.

The region about Bloomfield Hills abounds in variable flora and many distinct plant communities are to be found. A number of excellent botanical excu sions through this typically glaciated country are scheduled. Visits will be made to the Medicinal Plants Farm at Parkedale and to the Oakview Seed Breeding Institute of the Ferry-Morse Company and a visit to the Todd Mint Farms near Kalamazoo is being tentatively planned.

Mr. J. Russell Anderson, 15851 Evanston Avenue, Detroit, Michigan, is Local Secretary.

Dr. Henry L. Schelling, oldest living graduate of the Brooklyn College of Pharmacy has been elected an Honorary Trustee of that institution.

Parke, Davis and Company, Detroit, Michigan, is celebrating the seventy-fifth anniversary of its founding. The company had its inception in a small drug store in Detroit and has become one of the world's leading manufacturers of pharmaceutical and biological products.

For the second successive year no articles containing dinitrophenol were found in interstate commerce during the fiscal year ending June 30, 1940, according to the report of W. G. Campbell, Chief of the Food and Drug Administration.

Stating that the public benefit of the new Federal Food, Drug, and Cosmetic Act "cannot be measured wholly in terms of legal actions," Mr. Campbell stated that educational work of the Administration had brought about widespread changes in the composition and labeling of many classes of drugs, particularly headache remedies.

In the two years that the "new drug" provision of the law has been in effect, a total of 2752 applications for the introduction of such products have been received. Of these 1782 have been made effective, 776 are in an incomplete status pending the receipt of further information, 52 were received recently and are under initial consideration, 139 have been withdrawn by the applicants and 3 were refused.

The Merck Report, established in 1891, first as a monthly publication and, later, as a quarterly, celebrated its fiftieth anniversary in January in an issue of 48 pages and with an illustrated cover printed by the offset process. The cover depicts drug stores of 1890 contrasted with modern prescription pharmacies. Well and favorably known writers have contributed to the pages on phases of pharmaceutical development during the past half century in which members of the staff have been helpful.

1,639,004 persons visited the Lincoln Memorial last year, making it the most popular point in Washington for visitors. THE AMERICAN INSTITUTE OF PHARMACY is directly across Constitution Avenue from the Lincoln Memorial so these visitors could hardly help but see it and be impressed with this evidence of the importance of the pharmaceutical profession.

Tenth Annual Meeting of the Inter-Society Color Council will be held in Washington, D. C., March 4 and 5, 1941. THE AMERICAN PHARMACEUTICAL ASSOCIATION has been closely associated with the Council in the development of a scientific basis for color nomenclature as it applies to drugs, and two sessions of the annual meeting will be held at THE AMERICAN INSTITUTE OF PHARMACY.

Sixteen papers were presented at the two sessions of the Subsection of Pharmacy at the meeting of the American Association for the Advancement of Science, held in Philadelphia, on December 28th. Sixty-nine persons registered at the pharmacy meetings.

A. C. Boylston has been appointed president of the Mallinckrodt Chemical Works, St. Louis, Missouri, succeeding the late Oscar L. Biebinger. Dr. F. W. Russe has been appointed vice-president in addition to being secretary; M. A. Frohock has been appointed vice-president, and S. W. Coleman has been appointed general sales-manager.

Recent Donations to the library and museum of the AMERICAN INSTITUTE OF PHARMACY include the following:

A copy of the U. S. Dispensatory, 13th Edition, 1870, received from Ralph C. Dudrow, Hyattsville, Md.

Two packages of Lengol, a Japanese product which a few years ago was considered a new specific for respiratory diseases. Records accompanying the product are in Japanese, from a laboratory at Osaka. Received from Dr. S. L. Hilton, Washington, D. C.

An iodine keg, formerly used for the shipment of this chemical, received from J. J. Nichols, of the Iodine Educational Bureau, Inc., New York, N. Y.

Emil C. Horn, of Milwaukee, Wis., has been made an "Honorary and Life Member" of the Milwaukee County Pharmacists Association in recognition of his services to the organization as President and as chairman of its Professional Relations Committee.

Visitors at THE AMERICAN INSTITUTE OF PHARMACY during January included the following: Roy W. McCartney, Portland, Ore.; H. J. Cowell, Philadelphia, Pa.; W. D. Wilcox, Philadelphia, Pa.; M. W. Green, Washington, D. C.; John A. Wiborg, Brooklyn, N. Y.; Joseph Dubitzky, Hartford, Conn.; Leo Dubrow, Newark, N. J.; Alex Chase, Newark, N. J.; Louis Garawitz, Newark, N. J.; E. M. Houdlette, Augusta, Me.; Mrs. T. J. Britton, Arlington, Va.; L. L. Frey, Washington, D. C.; Max W. Katz, Newark, N. J.; Uriah M. Friedman, Brooklyn, N. Y.; J. P. Snyder and J. M. Snyder, Bethesda, Md.; Blaise Laurier, Washington, D. C.; W. Owen Hays, Washington, D. C.; Irving Kern, Brooklyn, N. Y.; Morris J. Allikin, Baltimore, Md.; Alexander O. Garuk, Baltimore, Md.

PROPOSED LIST OF HABIT-FORMING DRUG DERIVATIVES

GOVERNMENT SUBMITS LIST OF BARBITURIC ACID COMPOUNDS AND OTHER HABIT-FORMING DRUG DERIVATIVES THAT MUST BE LISTED QUANTITATIVELY ON LABELS WITH WARNING PHRASE.

UNDER provisions of the Federal Food and Drugs Act and its regulations, the label of a drug must bear the name and quantity or proportion which the product contains of alpha eucaine, barbituric acid, beta-eucaine, bromal, cannabis, carbromal, chloral, coca, cocaine, codeine, heroin, marihuana, morphine, opium, paraldehyde, peyote, and sulphonmethane, *or any chemical derivative of such substance which has been found by the Administrator after investigation to be habit-forming and has been designated as such by regulation.* In addition, such labels must bear the statement "Warning—May be habit-forming."

On January 30th the Administrator published a proposed list of derivatives of these substances which the Food and Drug Administration believes are habit-forming and a public hearing will be held on March 3rd for interested persons to offer evidence pertaining to the proposed list. The list may be adopted, rejected or amended by the Administrator on the basis of evidence presented at the hearing.

The proposed list of habit-forming derivatives is as follows:

CHEMICAL DERIVATIVES OF ALPHA EUCAINE

All salts of alpha eucaine formed by the combination of alpha eucaine with any acid. The common or usual name of each such salt is "alpha eucaine" followed by the name of the acid radical combined in such salt (as for example "alpha eucaine sulfate"); except that when the acid is hydrochloric acid, hydrobromic acid or hydriodic acid, the name which follows is "hydrochloride," "hydrobromide," or "hydriodide," as the case may be.

CHEMICAL DERIVATIVES OF BARBITURIC ACID

Alurate (5-allyl-5-isopropyl-barbituric acid).
Amytal (5-ethyl-5-isoamyl-barbituric acid).
Barbital (5,5-diethyl-barbituric acid).
Butisol (5-ethyl-5-sec-butyl-barbituric acid).
Cyclopal (5-allyl-5-cyclopentenyl-barbituric acid).
Delvinal (5-ethyl-5-(1-methyl-1-butenyl)-barbituric acid).
Dial (5,5-diallyl-barbituric acid).
Eldoral (5-ethyl-5-1(1-piperidyl)-barbituric acid).
Eunarcon (5-(2-bromoallyl)-5-isopropyl-1-methyl-barbituric acid).
Evipal (1,5-dimethyl-5-(1-cyclohexenyl)-barbituric acid).
Ipral (5-ethyl-5-isopropyl-barbituric acid).
Mebaral (5-ethyl-5-phenyl-1-methyl-barbituric acid).
Narconumal (5-allyl-5-isopropyl-1-methyl-barbituric acid).
Neonal (5-ethyl-5-butyl-barbituric acid).
Nostal (5-isopropyl-5-(2-bromoallyl)-barbituric acid).
Ortal (5-ethyl-5-hexyl-barbituric acid).
Pentenal (5-ethyl-5-cyclopentenyl-barbituric acid).
Pentobarbital (5-ethyl-5-(1-methyl-butyl)-barbituric acid).
Pentothal (5-ethyl-5-(1-methylbutyl-2-thio-barbituric acid).
Pernoston (5-sec-butyl-5-(2-bromoallyl)-barbituric acid).
Phanodorn (5-ethyl-5-(1-cyclohexenyl)-barbituric acid).
Phenobarbital (5-ethyl-5-phenyl-barbituric acid).
Prominal (5-ethyl-5-phenyl-1-methyl-barbituric acid).
Proponal (5,5-dipropyl-barbituric acid).
Rectidon (5-(2-bromoallyl)-5-(1-methylbutyl)-barbituric acid).
Rutonal (5-methyl-5-phenyl-barbituric acid).
Sandoptal (5-allyl-5-isobutyl-barbituric acid).
Seconal (5-allyl-5-(1-methylbutyl)-barbituric acid).
Sigmodal (5-amyl-5-(2-bromoallyl)-barbituric acid).

All lithium, sodium, potassium, magnesium, calcium, strontium, and ammonium salts of any such acids. The common or usual name of each such salt is the common or usual name under which such acid is herein listed preceded by the name of the basic ion with which it combined to form such salt.

CHEMICAL DERIVATIVES OF BETA EUCAINE

All salts of beta eucaine formed by the combination of beta eucaine with any acid. The common or usual name of each such salt is "beta eucaine" followed by the name of the acid radical combined in such salt (as for example "beta eucaine sulfate"); except that when the acid is hydrochloric acid, hydrobromic acid or hydriodic acid, the name which follows is "hydrochloride," "hydrobromide," or "hydriodide," as the case may be.

CHEMICAL DERIVATIVES OF BROMAL

Bromal Hydrate (tribromoacetaldehyde hydrate).
Brometone (2-(tribromomethyl)-2-propanol).
Bromoform (tribromomethane).

CHEMICAL DERIVATIVES OF CANNABIS AND MARIHUANA

Extract of Cannabis.
Fluidextract of Cannabis.
Tincture of Cannabis.

CHEMICAL DERIVATIVES OF CARBROMAL

Acetylcarbromal (a-bromo-a-ethyl-butyryl-acetyl-urea).
Bromural (a-bromoisovaleryl-urea).
Neuronal (a-bromo-a, a-diethyl-acetamide).
Sedormid (a-allylisovaleryl-urea).

CHEMICAL DERIVATIVES OF CHLORAL

Chloralformamide (n-(b-trichloro-a-hydroxy-ethyl)formamide.
a-Chloralose (a-(b-trichloro-a-hydroxyethyl)-d-glucoside).
Chloral Hydrate (trichloroacetaldehyde hydrate).
Chloralimide (trichloroethylideneimine).
Chlorobutanol (2-(trichloromethyl)-2-propanol).

CHEMICAL DERIVATIVES OF COCAINE

All salts of cocaine formed by the combination of cocaine with any acid. The common or usual name of each such salt is "cocaine" followed by the name of the acid radical combined in such salt (as for example "cocaine sulfate"); except that when the acid is hydrochloric acid, hydrobromic acid or hydriodic acid, the name which follows is "hydrochloride," "hydrobromide," or "hydriodide," as the case may be.

CHEMICAL DERIVATIVES OF CODEINE

Dicodid (dihydro-codeinone).
Eucodal (dihydrohydroxy-codeinone).
Eucodin (codeine methyl bromide).

Any salt of dicodid, eucodal or codeine formed by the combination of any such substance with any acid. The common or usual name of each such salt is "dicodid," "eucodal" or, "codeine," as the case may be, followed by the name of the acid radical combined in such salt (as for example "codeine sulfate"); except that when the acid is hydrochloric acid, hydrobromic acid, or hydriodic acid, the name which follows is "hydrochloride," "hydrobromide," or "hydriodide," as the case may be.

CHEMICAL DERIVATIVES OF HEROIN

All salts of heroin formed by the combination of heroin with any acid. The common or usual name of each such salt is "heroin."

CHEMICAL DERIVATIVES OF MORPHINE

Dilaudid (dihydro-morphinone).
Ethylmorphine.
Paramorphan (dihydro-morphine).

Any salt of dilaudid, paramorphan, ethylmorphine, or morphine formed by the combination of any such substance with any acid. The common or usual name of each such salt is "dilaudid," "paramorphan," "ethylmorphine", or "morphine," as the case may be, followed by the name of the acid radical combined in such salt (as for example "morphine sulfate"); except that when the acid is hydrochloric acid, hydrobromic acid, or hydriodic acid, the name which follows is "hydrochloride," "hydrobromide," or "hydrodide," as the case may be.

CHEMICAL DERIVATIVES OF OPIUM

Extract of Opium.
Fluidextract of Opium.
Tincture of Opium.

CHEMICAL DERIVATIVES OF PARALDEHYDE

Metaldehyde.

CHEMICAL DERIVATIVES OF SULPHONMETHANE

Sulfonethylmethane.
Sulfondiethylmethane.

CHLOROBUTANOL EXEMPTION

Another proposed regulation would exempt labels of products for parenteral use and containing small amounts of chlorobutanol as a preservation, as an analgesic, or both.

NEW BOOKS

ON DETAILING

DETAILING THE PHYSICIAN, by Tom Jones; 214 pages; 5½" x 8½"; cloth cover; First Edition; Romaine Pierson Publishers, Inc., New York, N. Y.; $2.75.

There should be five or six books on the detailing of physicians for this is certainly an important method of developing prescription practice; but there isn't. Mr. Jones' book, therefore, fills a real need and, although written primarily from the viewpoint of a manufacturer's representative, its general observations apply also to detailing by the pharmacist who is selling himself and his services rather than a specific product.

A GUIDE TO THERAPEUTICS

THE MERCK MANUAL OF THERAPEUTICS AND MATERIA MEDICA; 1436 pages; 4" x 6½"; Fabrokoid cover; Seventh Edition; Merck and Company, Rahway, N. J.; 1940; $2.00.

Although dedicated to the physician and planned primarily for his use, this handy, pocket-size book is worth many times its price to the practicing pharmacist who is interested in more than a casual knowledge of the use of drugs and pharmaceuticals. As the science of medicine and the treatment of disease has progressed it has become more and more specific. General symptoms are differentiated, traced to their origin, and medication is developed to produce fine shades of therapeutic action which will give effective and efficient relief.

The pharmacist keeps up-to-date with these developments in the current literature but time and time again he needs the help of clear, concise definitions of disease conditions as well as descriptions of their etiology and general treatment. He needs this information, not because he is going to attempt to practice medicine, but in order to appreciate the significance of medical advances and to be in a position to discuss them with physicians. When a new allergen is announced for use in the Frei test for venereal lympho-granuloma, as recently happened, the availability of a competent reference book such as the Merck Manual helps the pharmacist interpret the development, evaluate it and act accordingly.

The seventh edition introduces a number of new monographs on bile tract disease, circulatory failure, granuloma inguinale, granulocytopenia, impotence, hypoglycemia, hypo-ovarianism, obesity, roentgen-ray sickness, lymphadenopathies, jaundice, spirochetal jaundice, psychoneuroses, and psychoses. It contains a comprehensive poison and antidote chapter, an up-to-date dosage table which includes many seldom-used old drugs as well as the newer therapeutic agents, and a chapter on materia medica that carries the user right up through the sulfonamide drugs.

INFORMATION ON SPECIALTIES

MODERN DRUG ENCYCLOPEDIA AND THERAPEUTIC GUIDE, by Jacob Gutman, M.D., Phar.D.F., A.C.P.; 1644 + xxiv pages; 6" x 9". New Modern Drugs, New York, Second Edition, 1941.

When the National Drug Store Survey was made in St. Louis eight years ago, the investigators called attention to the tremendous task confronting the pharmacist in keeping a file of information concerning the hundreds of new prescription specialties which are introduced each year by manufacturers. Promptly upon the issuance of this report, the drug journals of the country started to publish descriptions of the composition, properties, uses and supply of such products in a style which enable pharmacists to cut out the individual write-ups, mount them on 3" x 5" cards and file them alphabetically. A further development was the publication of the first edition of the Modern Drug Encyclopedia in 1934. It has been kept up with regular supplements quarterly and is now published in its second edition.

The new edition presents descriptions of 11,114 modern, non-official, ethical medicinal preparations in 15,629 forms, comprising: 3421 drugs and chemicals, 663 biologicals, 691 endocrines, 2270 ampul medicaments, 3196 individual and group allergens and 879 miscellaneous products.

The book is well-edited in sections devoted to popular proprietary drugs, drugs for external use, endocrine preparations, hypodermic medicaments, biologicals, allergens, index to manufacturers and distributors, a therapeutic index, and a product index.

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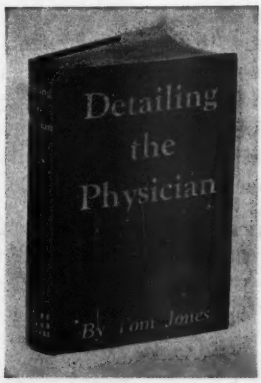

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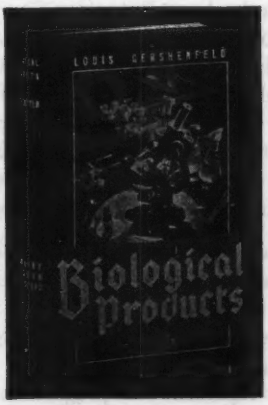

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COMMISSIONS FOR PHARMACISTS

Confirming the information released last month by the Committee on the Status of Pharmacists in Governmental Services of the AMERICAN PHARMACEUTICAL ASSOCIATION, the Surgeon General's Office has authorized publication of the following quotations from a memorandum addressed to the chairman of this committee:

> **1. Numerous inquiries are being received in this office regarding the appointment of pharmacists as Second Lieutenant, Medical Administrative Corps Reserve. It is considered advisable to clarify the attitude of the Surgeon General regarding such appointment.**
>
> **2. Although no assurance can be given that pharmacists will be utilized in the military service exclusively in the practice of that profession, pharmacy is considered one of the civilian vocations which involve duties similar to those required in the administration of Medical Department units and installations. However, since a completion of a four-year academic, scientific, technical course of instruction at a college or university of recognized standing and the receipt of an appropriate degree is required for an appointment in the Medical Administrative Corps Reserve, only those pharmacists who have been granted a degree of Bachelor of Science in Pharmacy from a school approved by the American Council on Pharmaceutical Education and who have had at least one year's experience in the practice of their profession should be considered eligible for enrollment in the Army Extension Course for examination for appointment as Second Lieutenant, Medical Administrative Corps Reserve.**
>
> **3. It is the opinion of this office that the pharmacy in each large hospital should be in charge of a specially trained and qualified officer. There are sufficient vacancies in the total peacetime procurement objective for the Medical Administrative Corps Reserve to permit of sufficient appointments for this purpose. Redistribution of vacancies in this objective have been recommended.**

Pharmacists who are unable to qualify for commission as second lieutenant in the Medical Administrative Reserve Corps should set forth their training and experience at the time of their induction in order to be assigned to the Medical Department for service as pharmacists. Such men will be given the rating of technical sergeant after the completion of their basic training.

These two steps represent real progress on the part of the AMERICAN PHARMACEUTICAL ASSOCIATION toward its dual objective of (1) having pharmaceutical services in the army rendered by qualified pharmacists and (2) having pharmacists in the army assigned to render pharmaceutical services.